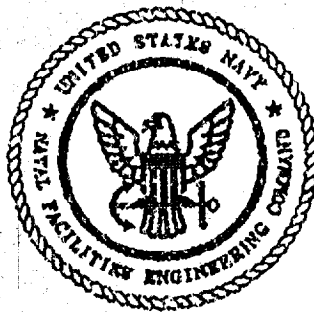


Final

**Remedial Investigation Report  
Operable Unit No. 14  
(Site 69)**

**Marine Corps Base  
Camp Lejeune, North Carolina**

**Appendices O-X  
Volume 2 of 2**



Prepared For:

**Department of the Navy  
Atlantic Division  
Naval Facilities  
Engineering Command  
Norfolk, Virginia**

Under the

**LANTDIV CLEAN Program**

**Comprehensive Long-Term  
Environmental Action Navy**

## LIST OF APPENDICES

A	Site 69 Geophysical Investigation
B	Target's Site Screening Reports
C	Test Boring Logs
D	Test Boring and Well Logs
E	Chain-of-Custody Forms
F	Well Development Records
G	Investigative Derived Wastes
H	Site 69 Aquifer Characterization Data
I	Sampling Summary
J	Engineering Parameters Summary
K	Field Duplicate Summary
L	Quality Assurance/Quality Control Summary
M	Baker Draft Evaluation of Metals in Groundwater
N	COPC Selection Worksheet
O	Data and Frequency Summaries
P	Statistical Summary
Q	Chronic Daily Intake Estimations
R	White Oak River Basin Reference Stations
S	Sampling Station Characterization Data Sheets
T	Habitat Survey Results
U	Threatened and Endangered Species List
V	Fish Population Statistics
W	Benthic Macroinvertebrate
X	Pre-Treatability Study Groundwater Investigation Results

**APPENDIX O**  
**DATA & FREQUENCY SUMMARIES**

**APPENDIX O.1**  
**SITE 69 SURFACE SOIL ORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
1,2,4-Trichlorobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
1,3-Dichlorobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
1,4-Dichlorobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2-Chloronaphthalene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2-Chlorophenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2-Methylnaphthalene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2-Methylphenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2-Nitroaniline	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
2-Nitrophenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,2'-oxybis-(1-chloropropane)	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,4-Dichlorophenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,4-Dimethylphenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,4-Dinitrophenol	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
2,4-Dinitrotoluene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,4,5-Trichlorophenol	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
2,4,6-Trichlorophenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
2,6-Dinitrotoluene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
3-Nitroaniline	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
3,3'-Dichlorobenzidine	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Bromophenyl-phenylether	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Chloro-3-methylphenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Chloroaniline	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Chlorophenyl phenyl ether	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Methylphenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
4-Nitroaniline	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
4-Nitrophenol	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
4,6-Dinitro-2-methylphenol	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U
Acenaphthene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Acenaphthylene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Anthracene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Benzo[a]anthracene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Benzo[a]pyrene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Benzo[g,h,i]perylene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Benzo[k]fluoranthene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
bis(2-Chloroethoxy) methane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
bis(2-Chloroethyl) ether	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	43.0 J	363.0 U
Butyl benzyl phthalate	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Carbazole	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Chrysene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Dibenzofuran	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Dibenz[a,h]anthracene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Diethylphthalate	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Dimethyl phthalate	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
di-n-Butylphthalate	UG/KG	363.0 U	350.0 U	51.0 J	36.0 J	200.0 J	280.0 J
di-n-Octylphthalate	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Fluoranthene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Fluorene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Hexachlorobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Hexachlorobutadiene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Hexachlorocyclopentadiene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Hexachloroethane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Indeno[1,2,3-cd]pyrene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Isophorone	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Naphthalene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Nitrobenzene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
N-Nitroso-di-n-propylamine	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
N-nitrosodiphenylamine	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Pentachlorophenol	UG/KG	880.0 U	848.0 U	864.0 U	880.0 U	880.0 U	880.0 U
Phenanthrene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Phenol	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U
Pyrene	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U	363.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00	
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8	
<u>VOLATILES</u>							
Chloromethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
Bromomethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
Vinyl chloride	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
Chloroethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
Methylene chloride	UG/KG	47.0 J	48.0	9.0 J	10.0 J	11.00 U	11.00 U
Acetone	UG/KG	87.0 U	62.0 U	11.0 UJ	31.0 J	150.0 J	180.0 J
Carbon Disulfide	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
1,1-Dichloroethene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
1,1-Dichloroethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
1,2-Dichloroethene(total)	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
Chloroform	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
1,2-Dichloroethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 U	10.8 U
2-Butanone	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 UJ	10.9 J	10.8 UJ
1,1,1-Trichloroethane	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Carbon tetrachloride	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Bromodichloromethane	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
1,2-Dichloropropane	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
cis-1,3-Dichloropropene	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Trichloroethene	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Dibromochloromethane	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
1,1,2-Trichloroethane	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Benzene	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
trans-1,3-Dichloropropene	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
Bromoform	UG/KG	10.8 U	10.6 U	10.8 U	10.8 U	10.9 U	10.8 U
4-Methyl-2-pentanone	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	12.0 J	10.8 U
2-Hexanone	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Tetrachloroethene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
1,1,2,2-Tetrachloroethane	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Toluene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Chlorobenzene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Ethylbenzene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Styrene	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U
Xylenes (total)	UG/KG	10.8 U	10.6 U	10.8 UJ	10.8 U	10.9 U	10.8 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
beta-BHC	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
delta-BHC	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Lindane (gamma-BHC)	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Heptachlor	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Aldrin	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Heptachlor epoxide	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Endosulfan I	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Dieldrin	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
4,4'-DDE	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
Endrin	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
Endosulfan II	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
4,4'-DDD	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
Endosulfan sulfate	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
4,4'-DDT	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
Methoxychlor	UG/KG	18.3 UJ	18.1 UJ	18.3 UJ	18.3 UJ	18.3 UJ
Endrin ketone	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
Endrin aldehyde	UG/KG	3.55 UJ	3.51 UJ	3.55 UJ	3.55 UJ	3.55 UJ
alpha-Chlordane	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
gamma-Chlordane	UG/KG	1.83 UJ	1.81 UJ	1.83 UJ	1.83 UJ	1.83 UJ
Toxaphene	UG/KG	183.0 UJ	181.0 UJ	183.0 UJ	183.0 UJ	183.0 UJ
Aroclor 1016	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ
Aroclor 1221	UG/KG	72.1 UJ	71.3 UJ	72.0 UJ	72.0 UJ	72.0 UJ
Aroclor 1232	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ
Aroclor 1242	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ
Aroclor 1248	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ
Aroclor 1254	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ
Aroclor 1260	UG/KG	35.5 UJ	35.1 UJ	35.5 UJ	35.5 UJ	35.5 UJ



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Chloroacetophenone	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Hydroxyacetophenone	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
1,4-Dithiane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
1,4-Oxathiane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	6.69 U	6.63 U	6.75 U	6.69 U	6.75 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
1,2,4-Trichlorobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
1,3-Dichlorobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
1,4-Dichlorobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2-Chloronaphthalene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2-Chlorophenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2-Methylnaphthalene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2-Methylphenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2-Nitroaniline	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
2-Nitrophenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,2'-oxybis-(1-chloropropane)	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,4-Dichlorophenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,4-Dimethylphenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,4-Dinitrophenol	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
2,4-Dinitrotoluene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,4,5-Trichlorophenol	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
2,4,6-Trichlorophenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
2,6-Dinitrotoluene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
3-Nitroaniline	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
3,3'-Dichlorobenzidine	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Bromophenyl-phenylether	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Chloro-3-methylphenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Chloroaniline	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Chlorophenyl phenyl ether	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Methylphenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
4-Nitroaniline	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
4-Nitrophenol	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
4,6-Dinitro-2-methylphenol	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U
Acenaphthene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
Acenaphthylene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
Anthracene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
Benzo[a]anthracene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U
Benzo[a]pyrene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Chloroacetophenone	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
Hydroxyacetophenone	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1820.0 U	1750.0 U	1780.0 U	1820.0 U	1820.0 U
1,4-Dithiane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
1,4-Oxathiane	UG/KG	363.0 U	350.0 U	356.0 U	363.0 U	363.0 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	6.69 U	6.63 U	6.75 U	6.69 U	6.81 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Benzo[g,h,i]perylene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Benzo[k]fluoranthene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
bis(2-Chloroethoxy) methane	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
bis(2-Chloroethyl) ether	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	47.0 J	367.0 U	363.0 U	48.0 J	380 U	367.0 U
Butyl benzyl phthalate	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Carbazole	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Chrysene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Dibenzofuran	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Dibenz[a,h]anthracene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Diethylphthalate	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Dimethyl phthalate	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
di-n-Butylphthalate	UG/KG	83.0 J	37.0 J	140.0 J	170.0 J	55 J	240.0 J
di-n-Octylphthalate	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Fluoranthene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Fluorene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Hexachlorobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Hexachlorobutadiene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Hexachlorocyclopentadiene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Hexachloroethane	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Indeno[1,2,3-cd]pyrene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Isophorone	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Naphthalene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Nitrobenzene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
N-Nitroso-di-n-propylamine	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
N-nitrosodiphenylamine	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Pentachlorophenol	UG/KG	880.0 U	889.0 U	880.0 U	848.0 U	920 U	889.0 U
Phenanthrene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Phenol	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Pyrene	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
<b>VOLATILES</b>							
Chloromethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Bromomethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Vinyl chloride	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Chloroethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Methylene chloride	UG/KG	11.0 UJ	11.00 U	11.0 UJ	6.00 J	6 J	12.0
Acetone	UG/KG	170.0 J	107.0 U	340.0 J	11.00 UJ	12 U	11.00 U
Carbon Disulfide	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
1,1-Dichloroethene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
1,1-Dichloroethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
1,2-Dichloroethene(total)	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Chloroform	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
1,2-Dichloroethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
2-Butanone	UG/KG	10.8 UJ	11.0 UJ	10.9 UJ	10.9 U	12 U	11.1 U
1,1,1-Trichloroethane	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Carbon tetrachloride	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Bromodichloromethane	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
1,2-Dichloropropane	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
cis-1,3-Dichloropropene	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Trichloroethene	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Dibromochloromethane	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
1,1,2-Trichloroethane	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Benzene	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
trans-1,3-Dichloropropene	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
Bromoform	UG/KG	10.8 UJ	11.0 U	10.9 U	10.9 U	12 U	11.1 U
4-Methyl-2-pentanone	UG/KG	11.0 J	10.0 J	10.9 UJ	10.9 U	12 U	11.1 U
2-Hexanone	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Tetrachloroethene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
1,1,2,2-Tetrachloroethane	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Toluene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Chlorobenzene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Ethylbenzene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Styrene	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U
Xylenes (total)	UG/KG	10.8 UJ	11.0 U	10.9 UJ	10.9 U	12 U	11.1 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
beta-BHC	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
delta-BHC	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Lindane (gamma-BHC)	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Heptachlor	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Aldrin	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Heptachlor epoxide	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Endosulfan I	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Dieldrin	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
4,4'-DDE	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
Endrin	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
Endosulfan II	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
4,4'-DDD	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
Endosulfan sulfate	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
4,4'-DDT	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
Methoxychlor	UG/KG	18.3 UJ	18.7 UJ	18.7 UJ	18.1 UJ	18.9 UJ
Endrin ketone	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
Endrin aldehyde	UG/KG	3.55 UJ	3.63 UJ	3.63 UJ	3.51 UJ	3.67 UJ
alpha-Chlordane	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
gamma-Chlordane	UG/KG	1.83 UJ	1.87 UJ	1.87 UJ	1.81 UJ	1.89 UJ
Toxaphene	UG/KG	183.0 UJ	187.0 UJ	187.0 UJ	181.0 UJ	189.0 UJ
Aroclor 1016	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ
Aroclor 1221	UG/KG	72.0 UJ	73.6 UJ	73.6 UJ	71.3 UJ	74.4 UJ
Aroclor 1232	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ
Aroclor 1242	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ
Aroclor 1248	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ
Aroclor 1254	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ
Aroclor 1260	UG/KG	35.5 UJ	36.3 UJ	36.3 UJ	35.1 UJ	36.7 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Chloroacetophenone	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
Hydroxyacetophenone	UG/KG	1820.0 U	120.0 J	1820.0 U	1750.0 U	1900 U	1830.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	1820.0 U	1830.0 U	1820.0 U	1750.0 U	1900 U	1830.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1820.0 U	1830.0 U	1820.0 U	1750.0 U	1900 U	1830.0 U
1,4-Dithiane	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
1,4-Oxathiane	UG/KG	363.0 U	367.0 U	363.0 U	350.0 U	380 U	367.0 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	6.75 U	6.89 U	6.89 U	6.63 U	7.19 U	6.94 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
1,2,4-Trichlorobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
1,3-Dichlorobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
1,4-Dichlorobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2-Chloronaphthalene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2-Chlorophenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2-Methylnaphthalene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2-Methylphenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2-Nitroaniline	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
2-Nitrophenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,2'-oxybis-(1-chloropropane)	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,4-Dichlorophenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,4-Dimethylphenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,4-Dinitrophenol	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
2,4-Dinitrotoluene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,4,5-Trichlorophenol	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
2,4,6-Trichlorophenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
2,6-Dinitrotoluene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
3-Nitroaniline	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
3,3'-Dichlorobenzidine	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Bromophenyl-phenylether	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Chloro-3-methylphenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Chloroaniline	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Chlorophenyl phenyl ether	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Methylphenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
4-Nitroaniline	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
4-Nitrophenol	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
4,6-Dinitro-2-methylphenol	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U
Acenaphthene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
Acenaphthylene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
Anthracene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
Benzo[a]anthracene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U
Benzo[a]pyrene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Benzo[g,h,i]perylene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Benzo[k]fluoranthene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
bis(2-Chloroethoxy) methane	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
bis(2-Chloroethyl) ether	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
bis(2-Ethylhexyl)phthalate	UG/KG	363.0 U	367 U	380 U	363.0 U	46 J	363 U
Butyl benzyl phthalate	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Carbazole	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Chrysene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Dibenzofuran	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Dibenz[a,h]anthracene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Diethylphthalate	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Dimethyl phthalate	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
di-n-Butylphthalate	UG/KG	230.0 J	200 J	140 J	160.0 J	140 J	86 J
di-n-Octylphthalate	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Fluoranthene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Fluorene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Hexachlorobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Hexachlorobutadiene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Hexachlorocyclopentadiene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Hexachloroethane	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Indeno[1,2,3-cd]pyrene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
isophorone	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Naphthalene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Nitrobenzene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
N-Nitroso-di-n-propylamine	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
N-nitrosodiphenylamine	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Pentachlorophenol	UG/KG	880.0 U	889 U	920 U	880.0 U	889 U	880 U
Phenanthrene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Phenol	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Pyrene	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<u>VOLATILES</u>						
Chloromethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Bromomethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Vinyl chloride	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Chloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Methylene chloride	UG/KG	5.00 J	7 J	10 J	8.00 J	6 J
Acetone	UG/KG	11.00 UJ	11 U	11 U	11.00 U	11 U
Carbon Disulfide	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,1-Dichloroethene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,1-Dichloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,2-Dichloroethene(total)	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Chloroform	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,2-Dichloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
2-Butanone	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,1,1-Trichloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Carbon tetrachloride	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Bromodichloromethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,2-Dichloropropane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
cis-1,3-Dichloropropene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Trichloroethene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Dibromochloromethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,1,2-Trichloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Benzene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
trans-1,3-Dichloropropene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Bromoform	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
4-Methyl-2-pentanone	UG/KG	10.9 U	11 U	1 J	2.00 J	1 J
2-Hexanone	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Tetrachloroethene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
1,1,2,2-Tetrachloroethane	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Toluene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Chlorobenzene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Ethylbenzene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Styrene	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U
Xylenes (total)	UG/KG	10.9 U	11 U	11 U	11.0 U	11 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
beta-BHC	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
delta-BHC	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Lindane (gamma-BHC)	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Heptachlor	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Aldrin	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Heptachlor epoxide	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Endosulfan I	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.87 UJ
Dieldrin	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.63 UJ
4,4'-DDE	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	4.8 J
Endrin	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.67 UJ
Endosulfan II	UG/KG	3.59 UJ	3.63 UJ	3.4 J	3.63 UJ	3.67 UJ
4,4'-DDD	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.67 UJ
Endosulfan sulfate	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.67 UJ
4,4'-DDT	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	13.3 J
Methoxychlor	UG/KG	18.5 UJ	18.7 UJ	19.6 UJ	18.7 UJ	18.9 UJ
Endrin ketone	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.67 UJ
Endrin aldehyde	UG/KG	3.59 UJ	3.63 UJ	3.8 UJ	3.63 UJ	3.67 UJ
alpha-Chlordane	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.89 UJ
gamma-Chlordane	UG/KG	1.85 UJ	1.87 UJ	1.96 UJ	1.87 UJ	1.89 UJ
Toxaphene	UG/KG	185.0 UJ	187 UJ	196 UJ	187.0 UJ	189 UJ
Aroclor 1016	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ
Aroclor 1221	UG/KG	72.8 UJ	73.7 UJ	77 UJ	73.6 UJ	74.4 UJ
Aroclor 1232	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ
Aroclor 1242	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ
Aroclor 1248	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ
Aroclor 1254	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ
Aroclor 1260	UG/KG	35.9 UJ	36.3 UJ	38 UJ	36.3 UJ	36.7 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00	
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A	
Date Sampled:	01/07/94			01/08/94			
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9	
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	363.0 U	367 U	380 U	363.0 U	51 J	363 U
Chloroacetophenone	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
Hydroxyacetophenone	UG/KG	1820.0 U	1830 U	1900 U	1820.0 U	160 J	1820 U
Bis(2'-chloroethyl)disulfide	UG/KG	1820.0 U	1830 U	1900 U	1820.0 U	1830 U	1820 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1820.0 U	1830 U	1900 U	1820.0 U	1830 U	1820 U
1,4-Dithiane	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
1,4-Oxathiane	UG/KG	363.0 U	367 U	380 U	363.0 U	367 U	363 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	6.75 U	6.88 U	7.19 U	6.81 U	6.94 U	6.21 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U
1,2,4-Trichlorobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U
1,3-Dichlorobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U
1,4-Dichlorobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U
2-Chloronaphthalene	UG/KG	561 U	370 U	376 U	363 U	356 U
2-Chlorophenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2-Methylnaphthalene	UG/KG	561 U	370 U	376 U	363 U	356 U
2-Methylphenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2-Nitroaniline	UG/KG	1360 U	896 U	912 U	880 U	864 U
2-Nitrophenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2,2'-oxybis-(1-chloropropane)	UG/KG	561 U	370 U	376 U	363 U	356 U
2,4-Dichlorophenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2,4-Dimethylphenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2,4-Dinitrophenol	UG/KG	1360 U	896 U	912 U	880 U	864 U
2,4-Dinitrotoluene	UG/KG	561 U	370 U	376 U	363 U	356 U
2,4,5-Trichlorophenol	UG/KG	1360 U	896 U	912 U	880 U	864 U
2,4,6-Trichlorophenol	UG/KG	561 U	370 U	376 U	363 U	356 U
2,6-Dinitrotoluene	UG/KG	561 U	370 U	376 U	363 U	356 U
3-Nitroaniline	UG/KG	1360 U	896 U	912 U	880 U	864 U
3,3'-Dichlorobenzidine	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Bromophenyl-phenylether	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Chloro-3-methylphenol	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Chloroaniline	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Chlorophenyl phenyl ether	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Methylphenol	UG/KG	561 U	370 U	376 U	363 U	356 U
4-Nitroaniline	UG/KG	1360 U	896 U	912 U	880 U	864 U
4-Nitrophenol	UG/KG	1360 U	896 U	912 U	880 U	864 U
4,6-Dinitro-2-methylphenol	UG/KG	1360 U	896 U	912 U	880 U	864 U
Acenaphthene	UG/KG	561 U	370 U	376 U	363 U	356 U
Acenaphthylene	UG/KG	561 U	370 U	376 U	363 U	356 U
Anthracene	UG/KG	561 U	370 U	376 U	363 U	356 U
Benzo[a]anthracene	UG/KG	561 U	370 U	376 U	363 U	356 U
Benzo[a]pyrene	UG/KG	561 U	370 U	376 U	363 U	356 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Benzo[g,h,i]perylene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Benzo[k]fluoranthene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
bis(2-Chloroethoxy) methane	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
bis(2-Chloroethyl) ether	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
bis(2-Ethylhexyl)phthalate	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Butyl benzyl phthalate	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Carbazole	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Chrysene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Dibenzofuran	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Dibenz[a,h]anthracene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Diethylphthalate	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Dimethyl phthalate	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
di-n-Butylphthalate	UG/KG	130 J	120 J	180 J	92 J	74 J	160 J
di-n-Octylphthalate	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Fluoranthene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Fluorene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Hexachlorobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Hexachlorobutadiene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Hexachlorocyclopentadiene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Hexachloroethane	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Indeno[1,2,3-cd]pyrene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Isophorone	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Naphthalene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Nitrobenzene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
N-Nitroso-di-n-propylamine	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
N-nitrosodiphenylamine	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Pentachlorophenol	UG/KG	1360 U	896 U	912 U	880 U	864 U	848 U
Phenanthrene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Phenol	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U
Pyrene	UG/KG	561 U	370 U	376 U	363 U	356 U	350 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6
<b><u>VOLATILES</u></b>						
Chloromethane	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.6 U
Bromomethane	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.6 U
Vinyl chloride	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.6 U
Chloroethane	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.6 U
Methylene chloride	UG/KG	17 U	11 UJ	36 U	97	105
Acetone	UG/KG	25 U	13 UJ	120 U	36 U	24 U
Carbon Disulfide	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.9 U
1,1-Dichloroethene	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.9 U
1,1-Dichloroethane	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.9 U
1,2-Dichloroethene(total)	UG/KG	16.7 U	4 J	11.4 U	11 U	10.9 U
Chloroform	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.9 U
1,2-Dichloroethane	UG/KG	16.7 U	11.3 UJ	11.4 U	11 U	10.9 U
2-Butanone	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
1,1,1-Trichloroethane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
Carbon tetrachloride	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
Bromodichloromethane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
1,2-Dichloropropane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
cis-1,3-Dichloropropene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
Trichloroethene	UG/KG	16.7 U	11.3 UJ	3 J	11 U	10.9 U
Dibromochloromethane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
1,1,2-Trichloroethane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
Benzene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 U
trans-1,3-Dichloropropene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Bromoform	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
4-Methyl-2-pentanone	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
2-Hexanone	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Tetrachloroethene	UG/KG	16.7 U	11.3 UJ	2 J	11 U	10.9 UJ
1,1,2,2-Tetrachloroethane	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Toluene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Chlorobenzene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Ethylbenzene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Styrene	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	10.9 UJ
Xylenes (total)	UG/KG	16.7 U	11.3 UJ	11.4 UJ	11 U	5 J

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
beta-BHC	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
delta-BHC	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Lindane (gamma-BHC)	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Heptachlor	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Aldrin	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Heptachlor epoxide	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Endosulfan I	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Dieldrin	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
4,4'-DDE	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
Endrin	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
Endosulfan II	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
4,4'-DDD	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
Endosulfan sulfate	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
4,4'-DDT	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
Methoxychlor	UG/KG	28.4 UJ	19.2 UJ	19.4 UJ	18.7 UJ	28.4 UJ
Endrin ketone	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
Endrin aldehyde	UG/KG	5.51 UJ	3.73 UJ	3.76 UJ	3.63 UJ	5.51 UJ
alpha-Chlordane	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
gamma-Chlordane	UG/KG	2.84 UJ	1.92 UJ	1.94 UJ	1.87 UJ	2.84 UJ
Toxaphene	UG/KG	284 UJ	192 UJ	194 UJ	187 UJ	284 UJ
Aroclor 1016	UG/KG	55.1 UJ	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ
Aroclor 1221	UG/KG	112 UJ	75.7 UJ	76.4 UJ	73.7 UJ	112 UJ
Aroclor 1232	UG/KG	55.1 UJ	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ
Aroclor 1242	UG/KG	55.1 UJ	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ
Aroclor 1248	UG/KG	55.1 UJ	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ
Aroclor 1254	UG/KG	55.1 UJ	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ
Aroclor 1260	UG/KG	94 J	37.3 UJ	37.6 UJ	36.3 UJ	55.1 UJ



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	561 U	370 U	376 U	363 U	356 U
Chloroacetophenone	UG/KG	561 U	370 U	376 U	363 U	356 U
Hydroxyacetophenone	UG/KG	2800 U	1850 U	1880 U	1820 U	1780 U
Bis(2'-chloroethyl)disulfide	UG/KG	2800 U	1850 U	1880 U	1820 U	1780 U
Bis(2'-chloroethyl)trisulfide	UG/KG	2800 U	1850 U	1880 U	1820 U	1780 U
1,4-Dithiane	UG/KG	561 U	370 U	376 U	363 U	356 U
1,4-Oxathlane	UG/KG	561 U	370 U	376 U	363 U	356 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	6.23 U	6.24 U	6.24 U	6.24 U	6.23 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

**SEMIVOLATILES**

1,2-Dichlorobenzene	UG/KG	367 U
1,2,4-Trichlorobenzene	UG/KG	367 U
1,3-Dichlorobenzene	UG/KG	367 U
1,4-Dichlorobenzene	UG/KG	367 U
2-Chloronaphthalene	UG/KG	367 U
2-Chlorophenol	UG/KG	367 U
2-Methylnaphthalene	UG/KG	367 U
2-Methylphenol	UG/KG	367 U
2-Nitroaniline	UG/KG	889 U
2-Nitrophenol	UG/KG	367 U
2,2'-oxybis-(1-chloropropane)	UG/KG	367 U
2,4-Dichlorophenol	UG/KG	367 U
2,4-Dimethylphenol	UG/KG	367 U
2,4-Dinitrophenol	UG/KG	889 U
2,4-Dinitrotoluene	UG/KG	367 U
2,4,5-Trichlorophenol	UG/KG	889 U
2,4,6-Trichlorophenol	UG/KG	367 U
2,6-Dinitrotoluene	UG/KG	367 U
3-Nitroaniline	UG/KG	889 U
3,3'-Dichlorobenzidine	UG/KG	367 U
4-Bromophenyl-phenylether	UG/KG	367 U
4-Chloro-3-methylphenol	UG/KG	367 U
4-Chloroaniline	UG/KG	367 U
4-Chlorophenyl phenyl ether	UG/KG	367 U
4-Methylphenol	UG/KG	367 U
4-Nitroaniline	UG/KG	889 U
4-Nitrophenol	UG/KG	889 U
4,6-Dinitro-2-methylphenol	UG/KG	889 U
Acenaphthene	UG/KG	367 U
Acenaphthylene	UG/KG	367 U
Anthracene	UG/KG	367 U
Benzo[a]anthracene	UG/KG	367 U
Benzo[a]pyrene	UG/KG	367 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

---

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	367 U
Benzo[g,h,i]perylene	UG/KG	367 U
Benzo[k]fluoranthene	UG/KG	367 U
bis(2-Chloroethoxy) methane	UG/KG	367 U
bis(2-Chloroethyl) ether	UG/KG	367 U
bis(2-Ethylhexyl)phthalate	UG/KG	367 U
Butyl benzyl phthalate	UG/KG	367 U
Carbazole	UG/KG	367 U
Chrysene	UG/KG	367 U
Dibenzofuran	UG/KG	367 U
Dibenz[a,h]anthracene	UG/KG	367 U
Diethylphthalate	UG/KG	367 U
Dimethyl phthalate	UG/KG	367 U
di-n-Butylphthalate	UG/KG	130 J
di-n-Octylphthalate	UG/KG	367 U
Fluoranthene	UG/KG	367 U
Fluorene	UG/KG	367 U
Hexachlorobenzene	UG/KG	367 U
Hexachlorobutadiene	UG/KG	367 U
Hexachlorocyclopentadiene	UG/KG	367 U
Hexachloroethane	UG/KG	367 U
Indeno[1,2,3-cd]pyrene	UG/KG	367 U
Isophorone	UG/KG	367 U
Naphthalene	UG/KG	367 U
Nitrobenzene	UG/KG	367 U
N-Nitroso-di-n-propylamine	UG/KG	367 U
N-nitrosodiphenylamine	UG/KG	367 U
Pentachlorophenol	UG/KG	889 U
Phenanthrene	UG/KG	367 U
Phenol	UG/KG	367 U
Pyrene	UG/KG	367 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

VOLATILES

Chloromethane	UG/KG	11 U
Bromomethane	UG/KG	11 U
Vinyl chloride	UG/KG	11 U
Chloroethane	UG/KG	11 U
Methylene chloride	UG/KG	11
Acetone	UG/KG	11 U
Carbon Disulfide	UG/KG	11 U
1,1-Dichloroethene	UG/KG	11 U
1,1-Dichloroethane	UG/KG	11 U
1,2-Dichloroethene(total)	UG/KG	11 U
Chloroform	UG/KG	11 U
1,2-Dichloroethane	UG/KG	11 U
2-Butanone	UG/KG	11 U
1,1,1-Trichloroethane	UG/KG	11 U
Carbon tetrachloride	UG/KG	11 U
Bromodichloromethane	UG/KG	11 U
1,2-Dichloropropane	UG/KG	11 U
cis-1,3-Dichloropropene	UG/KG	11 U
Trichloroethene	UG/KG	11 U
Dibromochloromethane	UG/KG	11 U
1,1,2-Trichloroethane	UG/KG	11 U
Benzene	UG/KG	11 U
trans-1,3-Dichloropropene	UG/KG	11 U
Bromoform	UG/KG	11 U
4-Methyl-2-pentanone	UG/KG	11 U
2-Hexanone	UG/KG	11 U
Tetrachloroethene	UG/KG	11 U
1,1,2,2-Tetrachloroethane	UG/KG	11 U
Toluene	UG/KG	11 U
Chlorobenzene	UG/KG	11 U
Ethylbenzene	UG/KG	11 U
Styrene	UG/KG	11 U
Xylenes (total)	UG/KG	11 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

PESTICIDE/PCBS		
alpha-BHC	UG/KG	1.87 UJ
beta-BHC	UG/KG	11 J
delta-BHC	UG/KG	1.87 UJ
Lindane (gamma-BHC)	UG/KG	1.87 UJ
Heptachlor	UG/KG	1.87 UJ
Aldrin	UG/KG	1.87 UJ
Heptachlor epoxide	UG/KG	1.87 UJ
Endosulfan I	UG/KG	1.87 UJ
Dieldrin	UG/KG	3.63 UJ
4,4'-DDE	UG/KG	3.63 UJ
Endrin	UG/KG	3.63 UJ
Endosulfan II	UG/KG	3.63 UJ
4,4'-DDD	UG/KG	3.63 UJ
Endosulfan sulfate	UG/KG	3.63 UJ
4,4'-DDT	UG/KG	3.63 UJ
Methoxychlor	UG/KG	18.7 UJ
Endrin ketone	UG/KG	3.63 UJ
Endrin aldehyde	UG/KG	3.63 UJ
alpha-Chlordane	UG/KG	1.87 UJ
gamma-Chlordane	UG/KG	1.87 UJ
Toxaphene	UG/KG	187 UJ
Aroclor 1016	UG/KG	36.3 UJ
Aroclor 1221	UG/KG	73.7 UJ
Aroclor 1232	UG/KG	36.3 UJ
Aroclor 1242	UG/KG	36.3 UJ
Aroclor 1248	UG/KG	36.3 UJ
Aroclor 1254	UG/KG	36.3 UJ
Aroclor 1260	UG/KG	36.3 UJ

FREQUENCY OF DETECTION SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
CHEMICAL STORAGE AREA SURFACE SOIL  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
ORGANICS

Client Sample ID: 69-CSA-SB25-00  
Laboratory Sample ID: 9401043-05A  
Date Sampled:  
Percent Solids 91

CHEMICAL SURETY

Acetophenone	UG/KG	367 U
Chloroacetophenone	UG/KG	367 U
Hydroxyacetophenone	UG/KG	1830 U
Bis(2'-chloroethyl)disulfide	UG/KG	1830 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1830 U
1,4-Dithiane	UG/KG	367 U
1,4-Oxathiane	UG/KG	367 U

THIODIGLYCOL

Thiodiglycol	MG/KG	6.88 U
--------------	-------	--------

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:

Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>SEMIVOLATILES</b>							
1,2-Dichlorobenzene	UG/KG	350 U	561 U	ND	ND		0/25
1,2,4-Trichlorobenzene	UG/KG	350 U	561 U	ND	ND		0/25
1,3-Dichlorobenzene	UG/KG	350 U	561 U	ND	ND		0/25
1,4-Dichlorobenzene	UG/KG	350 U	561 U	ND	ND		0/25
2-Chloronaphthalene	UG/KG	350 U	561 U	ND	ND		0/25
2-Chlorophenol	UG/KG	350 U	561 U	ND	ND		0/25
2-Methylnaphthalene	UG/KG	350 U	561 U	ND	ND		0/25
2-Methylphenol	UG/KG	350 U	561 U	ND	ND		0/25
2-Nitroaniline	UG/KG	848 U	1360 U	ND	ND		0/25
2-Nitrophenol	UG/KG	350 U	561 U	ND	ND		0/25
2,2'-oxybis-(1-chloropropane)	UG/KG	350 U	561 U	ND	ND		0/25
2,4-Dichlorophenol	UG/KG	350 U	561 U	ND	ND		0/25
2,4-Dimethylphenol	UG/KG	350 U	561 U	ND	ND		0/25
2,4-Dinitrophenol	UG/KG	848 U	1360 U	ND	ND		0/25
2,4-Dinitrotoluene	UG/KG	350 U	561 U	ND	ND		0/25
2,4,5-Trichlorophenol	UG/KG	848 U	1360 U	ND	ND		0/25
2,4,6-Trichlorophenol	UG/KG	350 U	561 U	ND	ND		0/25
2,6-Dinitrotoluene	UG/KG	350 U	561 U	ND	ND		0/25
3-Nitroaniline	UG/KG	848 U	1360 U	ND	ND		0/25
3,3'-Dichlorobenzidine	UG/KG	350 U	561 U	ND	ND		0/25
4-Bromophenyl-phenylether	UG/KG	350 U	561 U	ND	ND		0/25
4-Chloro-3-methylphenol	UG/KG	350 U	561 U	ND	ND		0/25
4-Chloroaniline	UG/KG	350 U	561 U	ND	ND		0/25
4-Chlorophenyl phenyl ether	UG/KG	350 U	561 U	ND	ND		0/25
4-Methylphenol	UG/KG	350 U	561 U	ND	ND		0/25
4-Nitroaniline	UG/KG	848 U	1360 U	ND	ND		0/25
4-Nitrophenol	UG/KG	848 U	1360 U	ND	ND		0/25
4,6-Dinitro-2-methylphenol	UG/KG	848 U	1360 U	ND	ND		0/25
Acenaphthene	UG/KG	350 U	561 U	ND	ND		0/25
Acenaphthylene	UG/KG	350 U	561 U	ND	ND		0/25
Anthracene	UG/KG	350 U	561 U	ND	ND		0/25
Benzo[a]anthracene	UG/KG	350 U	561 U	ND	ND		0/25
Benzo[a]pyrene	UG/KG	350 U	561 U	ND	ND		0/25

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:

Laboratory Sample ID:

Date Sampled:

Percent Solids

		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>SEMIVOLATILES Cont.</u>							
Benzo[b]fluoranthene	UG/KG	350 U	561 U	ND	ND		0/25
Benzo[g,h,i]perylene	UG/KG	350 U	561 U	ND	ND		0/25
Benzo[k]fluoranthene	UG/KG	350 U	561 U	ND	ND		0/25
bis(2-Chloroethoxy) methane	UG/KG	350 U	561 U	ND	ND		0/25
bis(2-Chloroethyl) ether	UG/KG	350 U	561 U	ND	ND		0/25
bis(2-Ethylhexyl)phthalate	UG/KG	350 U	561 U	43 J	48 J	69-CSA-SB10-00	4/25
Butyl benzyl phthalate	UG/KG	350 U	561 U	ND	ND		0/25
Carbazole	UG/KG	350 U	561 U	ND	ND		0/25
Chrysene	UG/KG	350 U	561 U	ND	ND		0/25
Dibenzofuran	UG/KG	350 U	561 U	ND	ND		0/25
Dibenz[a,h]anthracene	UG/KG	350 U	561 U	ND	ND		0/25
Diethylphthalate	UG/KG	350 U	561 U	ND	ND		0/25
Dimethyl phthalate	UG/KG	350 U	561 U	ND	ND		0/25
di-n-Butylphthalate	UG/KG	350 U	363 U	36 J	280 J	69-CSA-SB06-00	23/25
di-n-Octylphthalate	UG/KG	350 U	561 U	ND	ND		0/25
Fluoranthene	UG/KG	350 U	561 U	ND	ND		0/25
Fluorene	UG/KG	350 U	561 U	ND	ND		0/25
Hexachlorobenzene	UG/KG	350 U	561 U	ND	ND		0/25
Hexachlorobutadiene	UG/KG	350 U	561 U	ND	ND		0/25
Hexachlorocyclopentadiene	UG/KG	350 U	561 U	ND	ND		0/25
Hexachloroethane	UG/KG	350 U	561 U	ND	ND		0/25
Indeno[1,2,3-cd]pyrene	UG/KG	350 U	561 U	ND	ND		0/25
Isophorone	UG/KG	350 U	561 U	ND	ND		0/25
Naphthalene	UG/KG	350 U	561 U	ND	ND		0/25
Nitrobenzene	UG/KG	350 U	561 U	ND	ND		0/25
N-Nitroso-di-n-propylamine	UG/KG	350 U	561 U	ND	ND		0/25
N-nitrosodiphenylamine	UG/KG	350 U	561 U	ND	ND		0/25
Pentachlorophenol	UG/KG	848 U	1360 U	ND	ND		0/25
Phenanthrene	UG/KG	350 U	561 U	ND	ND		0/25
Phenol	UG/KG	350 U	561 U	ND	ND		0/25
Pyrene	UG/KG	350 U	561 U	ND	ND		0/25



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:

Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>VOLATILES</u>							
Chloromethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Bromomethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Vinyl chloride	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Chloroethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Methylene chloride	UG/KG	10.6 U	36 U	5 J	105	69-CSA-SB23-00	15/25
Acetone	UG/KG	10.6 U	120 U	31 J	340 J	69-CSA-SB09-00	5/25
Carbon Disulfide	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,1-Dichloroethene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,1-Dichloroethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,2-Dichloroethene(total)	UG/KG	10.6 U	16.7 U	4 J	4 J	69-CSA-SB20-00	1/25
Chloroform	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,2-Dichloroethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
2-Butanone	UG/KG	10.6 U	16.7 U	10.9 J	10.9 J	69-CSA-SB23-00	1/25
1,1,1-Trichloroethane	UG/KG	10.6 U	16.7 U	2 J	2 J	69-CSA-SB18-00	1/25
Carbon tetrachloride	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Bromodichloromethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,2-Dichloropropane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
cis-1,3-Dichloropropene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Trichloroethene	UG/KG	10.6 U	16.7 U	3 J	3 J	69-CSA-SB21-00	1/25
Dibromochloromethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
1,1,2-Trichloroethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Benzene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
trans-1,3-Dichloropropene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Bromoform	UG/KG	10.6 U	16.7 U	ND	ND		0/25
4-Methyl-2-pentanone	UG/KG	10.6 U	16.7 U	1 J	12 J	69-CSA-SB11-00	6/25
2-Hexanone	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Tetrachloroethene	UG/KG	10.6 U	16.7 U	2 J	2 J	69-CSA-SB21-00	1/25
1,1,2,2-Tetrachloroethane	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Toluene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Chlorobenzene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Ethylbenzene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Styrene	UG/KG	10.6 U	16.7 U	ND	ND		0/25
Xylenes (total)	UG/KG	10.6 U	16.7 U	5 J	5 J	69-CSA-SB23-00	1/25

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:  
 Percent Solids

PESTICIDE/PCBS		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM DETECTED	OF DETECTION
alpha-BHC	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
beta-BHC	UG/KG	1.81 UJ	2.84 UJ	11 J	11 J	69-CSA-SB25-00	1/25
delta-BHC	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Lindane (gamma-BHC)	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Heptachlor	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Aldrin	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Heptachlor epoxide	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Endosulfan I	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Dieldrin	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
4,4'-DDE	UG/KG	3.51 UJ	5.51 UJ	4.8 J	4.8 J	69-CSA-SB17-00	1/25
Endrin	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
Endosulfan II	UG/KG	3.51 UJ	5.51 UJ	3.4 J	3.4 J	69-CSA-SB15-00	1/25
4,4'-DDD	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
Endosulfan sulfate	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
4,4'-DDT	UG/KG	3.51 UJ	5.51 UJ	13.3 J	13.3 J	69-CSA-SB17-00	1/25
Methoxychlor	UG/KG	18.1 UJ	28.4 UJ	ND	ND		0/25
Endrin ketone	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
Endrin aldehyde	UG/KG	3.51 UJ	5.51 UJ	ND	ND		0/25
alpha-Chlordane	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
gamma-Chlordane	UG/KG	1.81 UJ	2.84 UJ	ND	ND		0/25
Toxaphene	UG/KG	181 UJ	284 UJ	ND	ND		0/25
Aroclor 1016	UG/KG	35.1 UJ	55.1 UJ	ND	ND		0/25
Aroclor 1221	UG/KG	71.3 UJ	112 UJ	ND	ND		0/25
Aroclor 1232	UG/KG	35.1 UJ	55.1 UJ	ND	ND		0/25
Aroclor 1242	UG/KG	35.1 UJ	55.1 UJ	ND	ND		0/25
Aroclor 1248	UG/KG	35.1 UJ	55.1 UJ	ND	ND		0/25
Aroclor 1254	UG/KG	35.1 UJ	55.1 UJ	ND	ND		0/25
Aroclor 1260	UG/KG	35.1 UJ	55.1 UJ	94 J	94 J	69-CSA-SB19-00	1/25

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:

		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Percent Solids		NONDETECTED	NONDETECTED	DETECTED	DETECTED		
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	350 U	561 U	51 J	51 J	69-CSA-SB17-00	1/25
Chloroacetophenone	UG/KG	350 U	561 U	ND	ND		0/25
Hydroxyacetophenone	UG/KG	1750 U	2800 U	120 J	160 J	69-CSA-SB17-00	2/25
Bis(2'-chloroethyl)disulfide	UG/KG	1750 U	2800 U	ND	ND		0/25
Bis(2'-chloroethyl)trisulfide	UG/KG	1750 U	2800 U	ND	ND		0/25
1,4-Dithiane	UG/KG	350 U	561 U	ND	ND		0/25
1,4-Oxathiane	UG/KG	350 U	561 U	ND	ND		0/25
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	6.21 U	7.19 U	ND	ND		0/25

**APPENDIX O.2**  
**SITE 69 SURFACE SOIL INORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8

	UNITS	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Aluminum	MG/KG	967.0	1370.0	2270.0	1520.0	2310.0	2600.0
Antimony	MG/KG	1.70 U	1.70 U	1.70 U	1.70 U	1.70 U	1.70 U
Arsenic	MG/KG	0.620 U	0.620 U	0.630 U	0.620 U	0.630 U	0.620 U
Barium	MG/KG	3.50	4.10	4.30	3.00	4.40	4.10
Beryllium	MG/KG	0.280 U	0.280 U	0.280 U	0.280 U	0.280 U	0.280 U
Cadmium	MG/KG	0.510 U	0.510 U	0.520 U	0.520 U	0.520 U	0.520 U
Calcium	MG/KG	26.8 U	26.5 U	27.0 U	26.8 U	27.2 U	26.9 U
Chromium	MG/KG	1.50 U	1.50 U	1.60	1.50 U	2.20	1.70
Cobalt	MG/KG	4.20 U	4.10 U	4.20 U	4.20 U	4.20 U	4.20 U
Copper	MG/KG	3.50 U	3.40 U	3.50 U	3.50 U	3.50 U	3.50 U
Iron	MG/KG	465.0	803.0	1200.0	1040.0	1170.0	1400.0
Lead	MG/KG	2.80 J	2.10 J	1.10 J	2.20 J	1.20 J	2.10 J
Magnesium	MG/KG	31.3	12.9	54.8	29.3	60.3	63.4
Manganese	MG/KG	15.5	8.20	4.80	2.40	4.90	6.50
Mercury	MG/KG	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Nickel	MG/KG	2.90 U	2.90 U	2.90 U	2.90 U	3.00 U	2.90 U
Potassium	MG/KG	64.3 U	63.7 U	64.7 U	64.4 U	65.2 U	66.1
Selenium	MG/KG	0.540 UJ	0.530 UJ	0.540 UJ	0.540 UJ	0.540 UJ	0.540 UJ
Silver	MG/KG	0.090 UJ	0.080 UJ	0.090 UJ	0.090 UJ	0.090 UJ	0.090 J
Sodium	MG/KG	40.7 UJ	40.3 UJ	41.0 UJ	40.8 UJ	41.3 UJ	40.9 UJ
Thallium	MG/KG	0.990 U	0.980 U	0.990 U	0.990 U	1.00 U	0.990 U
Vanadium	MG/KG	3.60 U	3.50 U	3.60 U	3.60 U	3.60 U	3.60 U
Zinc	MG/KG	2.70 U	3.00 U	2.40 U	3.00 U	2.50 U	3.20 U
Total Cyanide	MG/KG	1.10 UJ	1.10 UJ	1.10 UJ	1.10 UJ	1.10 UJ	1.10 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
UNITS							
Aluminum	MG/KG	3100.0	1330.0	2050.0	2180.0	1130	3370.0
Antimony	MG/KG	1.70 U	1.70 U	1.70 U	1.70 U	1.8 U	1.80 U
Arsenic	MG/KG	0.620 U	0.640 U	0.640 U	0.620 U	0.67 U	0.650 U
Barium	MG/KG	4.30	3.00 U	3.70	3.50	4.3	3.10
Beryllium	MG/KG	0.280 U	0.280 U	0.280 U	0.280 U	0.3 U	0.290 U
Cadmium	MG/KG	0.520 U	0.530 U	0.530 U	0.510 U	0.55 U	0.540 U
Calcium	MG/KG	26.9 U	27.4 U	69.3	26.5 U	39.7	27.9 U
Chromium	MG/KG	2.30	1.70	1.90	1.50 U	2.3 U	3.60
Cobalt	MG/KG	4.20 U	4.20 U	4.20 U	4.10 U	4.5 U	4.30 U
Copper	MG/KG	3.50 U	3.50 U	3.50 U	3.40 U	3.7 U	3.60 U
Iron	MG/KG	1410.0	622.0	1480.0	1230.0	461	2360.0
Lead	MG/KG	3.00 J	2.30 J	2.70 J	1.70 J	1.9	1.50 J
Magnesium	MG/KG	40.1	22.7	41.3	44.6	33.6	63.1
Manganese	MG/KG	5.60	2.90	2.70	5.50	2.3	1.90
Mercury	MG/KG	0.050 U	0.050 U	0.050 U	0.050 U	0.04 U	0.060 U
Nickel	MG/KG	2.90 U	3.00 U	3.00 U	2.90 U	3.1 U	3.00 U
Potassium	MG/KG	64.6 U	65.7 U	65.7 U	63.7 U	69 UJ	66.9 U
Selenium	MG/KG	0.540 UJ	0.550 UJ	0.550 UJ	0.530 UJ	0.58 UJ	0.560 UJ
Silver	MG/KG	0.090 UJ	0.090 UJ	0.090 UJ	0.080 UJ	0.34 J	0.090 UJ
Sodium	MG/KG	40.9 UJ	41.6 UJ	41.6 UJ	40.3 UJ	42.8 U	42.4 UJ
Thallium	MG/KG	0.990 U	1.00 U	1.00 U	0.980 U	1.1 U	1.00 U
Vanadium	MG/KG	3.60 U	3.60 U	3.60 U	3.50 U	3.8 U	5.30
Zinc	MG/KG	3.10	3.80 U	2.70 U	2.40 U	3.1	2.70 U
Total Cyanide	MG/KG	1.10 UJ	1.10 UJ	1.10 UJ	1.10 UJ	2.3	1.10 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
	UNITS					
Aluminum	MG/KG	3020.0	1350	800	2630.0	2700
Antimony	MG/KG	1.70 U	1.7 U	1.8 U	1.70 U	1.7 U
Arsenic	MG/KG	0.630 U	0.64 U	0.67 U	0.630 U	0.64 UJ
Barium	MG/KG	3.80	3 U	3.1 U	3.00	4.6
Beryllium	MG/KG	0.280 U	0.29 U	0.3 U	0.280 U	0.29 U
Cadmium	MG/KG	0.520 U	0.53 U	0.55 U	0.530 U	0.53 U
Calcium	MG/KG	27.1 U	27.6 U	28.7 U	27.4 U	39.2
Chromium	MG/KG	2.80	1.6 UJ	2.1 U	2.00	3.6
Cobalt	MG/KG	4.20 U	4.3 U	4.5 U	4.20 U	4.3 U
Copper	MG/KG	3.50 U	3.6 U	3.7 U	3.50 U	3.6 U
Iron	MG/KG	1870.0	886	298	1340.0	1730
Lead	MG/KG	1.50 J	3.3	1.1	1.60 J	2.5
Magnesium	MG/KG	52.5	28.6	13.6 U	57.2	67.7
Manganese	MG/KG	5.20	2	1.5	4.70	1.7
Mercury	MG/KG	0.050 U	0.06 U	0.06 U	0.050 U	0.06 UJ
Nickel	MG/KG	2.90 U	3 U	3.1 U	3.00 U	3 U
Potassium	MG/KG	66.4	66.2 UJ	68.9 UJ	65.6 U	66 U
Selenium	MG/KG	0.540 UJ	0.55 UJ	0.57 U	0.550 UJ	0.55 U
Silver	MG/KG	0.090 UJ	0.09 UJ	0.09 UJ	0.090 UJ	0.09 UJ
Sodium	MG/KG	41.2 UJ	41.1 U	42.7 U	41.6 UJ	41.8 U
Thallium	MG/KG	1.00 U	1 UJ	1.1 U	1.00 U	1 U
Vanadium	MG/KG	4.20	3.7 U	3.8 U	3.60 U	3.9
Zinc	MG/KG	3.20 U	2.7	2.8	3.50 U	2.2
Total Cyanide	MG/KG	1.10 UJ	2.2	2.3	1.10 UJ	1.1

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00	
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A	
Date Sampled:							
Percent Solids	59.7	88.7	88	91	91.8	93.6	
	UNITS						
Aluminum	MG/KG	1320	986	775	498	368	451
Antimony	MG/KG	2.6 U	1.8 UJ	1.8 UJ	1.7 U	1.7 UJ	1.7 UJ
Arsenic	MG/KG	0.97 UJ	0.65 UJ	0.66 UJ	0.64 UJ	0.63 UJ	0.62 UJ
Barium	MG/KG	5.1	3.1 U	6.8	3 U	3 U	2.9 U
Beryllium	MG/KG	0.44 U	0.29 U	0.3 U	0.29 U	0.28 U	0.28 U
Cadmium	MG/KG	0.8 U	0.54 U	0.55 U	0.53 U	0.52 U	0.51 U
Calcium	MG/KG	101	56.2	65.2	35.8	54.6	26.7 U
Chromium	MG/KG	3	2.2	1.8	2.1	1.7	2.9
Cobalt	MG/KG	6.5 U	4.4 U	4.4 U	4.3 U	4.2 U	4.1 U
Copper	MG/KG	5.4 U	3.7 U	3.7 U	3.6 U	3.5 U	3.5 U
Iron	MG/KG	1110	671	478	483	235	294
Lead	MG/KG	2.6 J	2.3 J	4.1	1.9 J	1.1	2.1
Magnesium	MG/KG	23.5	22.8	18.1	17.7	17.6	16.6
Manganese	MG/KG	2.8	1.3	1.2 U	1.2 U	1.2 U	2.2
Mercury	MG/KG	0.08 UJ	0.06 UJ	0.06 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Nickel	MG/KG	4.6 U	3.1 U	3.1 U	3 U	3 U	2.9 U
Potassium	MG/KG	101 U	67.6 U	68.2 U	65.9 U	65.4 U	64.1 U
Selenium	MG/KG	0.84 U	0.56 U	1.1	0.55 U	0.54 U	0.53 U
Silver	MG/KG	0.13 UJ	0.09 UJ	0.09 UJ	0.09 UJ	0.09 UJ	0.09 UJ
Sodium	MG/KG	63.7 U	42.8 U	43.2 U	41.8 U	41.4 U	40.6 U
Thallium	MG/KG	1.5 U	1 U	1 U	1 U	1 U	0.98 U
Vanadium	MG/KG	5.6 U	3.7 U	3.8 U	3.6 U	3.6 U	3.5 U
Zinc	MG/KG	66	2.2	1.6 U	2.4	1.5	1.5
Total Cyanide	MG/KG	1.7	1.1	1.1	1.1	1.1	1.1



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

---

	UNITS	
Aluminum	MG/KG	2990
Antimony	MG/KG	1.7 U
Arsenic	MG/KG	0.64 U
Barium	MG/KG	3.3
Beryllium	MG/KG	0.29 U
Cadmium	MG/KG	0.53 U
Calcium	MG/KG	27.5 U
Chromium	MG/KG	3.1 J
Cobalt	MG/KG	4.3 U
Copper	MG/KG	3.6 U
Iron	MG/KG	1870
Lead	MG/KG	2
Magnesium	MG/KG	57.1
Manganese	MG/KG	2.9
Mercury	MG/KG	0.08 U
Nickel	MG/KG	3 U
Potassium	MG/KG	65.9 UJ
Selenium	MG/KG	0.55 U
Silver	MG/KG	10.2 J
Sodium	MG/KG	40.9 U
Thallium	MG/KG	1 U
Vanadium	MG/KG	3.6 U
Zinc	MG/KG	2.7
Total Cyanide	MG/KG	2.2

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:  
 Laboratory Sample ID:

Date Sampled:  
 Percent Solids

		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM	OF
						DETECTED	DETECTION
	<u>UNITS</u>						
Aluminum	MG/KG	NA	NA	368	3370	69-CSA-SB12-00	25/25
Antimony	MG/KG	1.7 U	2.6 U	ND	ND		0/25
Arsenic	MG/KG	0.62 U	0.97 UJ	ND	ND		0/25
Barium	MG/KG	2.9 U	3.1 U	3	6.8	69-CSA-SB21-00	17/25
Beryllium	MG/KG	0.28 U	0.44 U	ND	ND		0/25
Cadmium	MG/KG	0.51 U	0.8 U	ND	ND		0/25
Calcium	MG/KG	26.5 U	28.7 U	35.8	101	69-CSA-SB19-00	8/25
Chromium	MG/KG	1.5 U	2.3 U	1.6	3.6	69-CSA-SB18-00	18/25
Cobalt	MG/KG	4.1 U	6.5 U	ND	ND		0/25
Copper	MG/KG	3.4 U	5.4 U	ND	ND		0/25
Iron	MG/KG	NA	NA	235	2360	69-CSA-SB12-00	25/25
Lead	MG/KG	NA	NA	1.1 J	12.5	69-CSA-SB17-00	25/25
Magnesium	MG/KG	13.6 U	13.6 U	12.9	67.7	69-CSA-SB18-00	24/25
Manganese	MG/KG	1.2 U	1.2 U	1.3	15.5	69-CSA-SB01-00	22/25
Mercury	MG/KG	0.04 U	0.08 UJ	ND	ND		0/25
Nickel	MG/KG	2.9 U	4.6 U	ND	ND		0/25
Potassium	MG/KG	63.7 U	101 U	66.1	66.4	69-CSA-SB17-00	2/25
Selenium	MG/KG	0.53 UJ	0.84 U	1.1	1.1	69-CSA-SB21-00	1/25
Silver	MG/KG	0.08 UJ	0.13 UJ	0.09 J	10.2 J	69-CSA-SB25-00	4/25
Sodium	MG/KG	40.3 UJ	63.7 U	ND	ND		0/25
Thallium	MG/KG	0.98 U	1.5 U	ND	ND		0/25
Vanadium	MG/KG	3.5 U	5.6 U	3.9	5.3	69-CSA-SB12-00	3/25
Zinc	MG/KG	1.6 U	3.8 U	1.5	66	69-CSA-SB19-00	12/25
Total Cyanide	MG/KG	1.1 UJ	1.1 UJ	1.1	2.3	69-CSA-SB15-00	12/25

**APPENDIX O.3**  
**SITE 69 SUBSURFACE SOIL ORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3

UNITS

SEMIVOLATILES

	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04	
1,2-Dichlorobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
1,2,4-Trichlorobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
1,3-Dichlorobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
1,4-Dichlorobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
1,4-Dithiane	UG/KG	NA	NA	NA	NA	NA	NA
1,4-Oxathiane	UG/KG	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2-Chlorophenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2-Methylnaphthalene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2-Methylphenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2-Nitroaniline	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
2-Nitrophenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,2'-oxybis-(1-chloropropane)	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,4-Dichlorophenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,4-Dimethylphenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,4-Dinitrophenol	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
2,4-Dinitrotoluene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,4,5-Trichlorophenol	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
2,4,6-Trichlorophenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
2,6-Dinitrotoluene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
3-Nitroaniline	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
3,3'-Dichlorobenzidine	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Bromophenyl-phenylether	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Chloro-3-methylphenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Chloroaniline	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Chlorophenyl phenyl ether	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Methylphenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
4-Nitroaniline	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
4-Nitrophenol	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
4,6-Dinitro-2-methylphenol	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
Acenaphthene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Acenaphthylene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Acetophenone	UG/KG	NA	NA	NA	NA	NA	NA
Anthracene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Benzo[a]anthracene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Benzo[a]pyrene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Benzo[g,h,i]perylene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Benzo[k]fluoranthene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
bis(2-Chloroethoxy) methane	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
bis(2-Chloroethyl) ether	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	502 U	436 U	350.0 U	397.0 U	53.0 J	386.0 U
Butyl benzyl phthalate	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Carbazole	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Chloroacetophenone	UG/KG	NA	NA	NA	NA	NA	NA
Chrysene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Dibenzofuran	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Dibenz[a,h]anthracene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Diethylphthalate	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Dimethyl phthalate	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
di-n-Butylphthalate	UG/KG	88 J	120 J	350.0 U	400.0 U	58.0 J	53.0 J
di-n-Octylphthalate	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Fluoranthene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Fluorene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Hexachlorobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Hexachlorobutadiene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Hexachlorocyclopentadiene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Hexachloroethane	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Hydroxyacetophenone	UG/KG	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Isophorone	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Naphthalene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Nitrobenzene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
N-Nitroso-di-n-propylamine	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
N-nitrosodiphenylamine	UG/KG	502 UJ	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Pentachlorophenol	UG/KG	1220 U	1060 U	848.0 U	963.0 U	1090.0 U	936.0 U
Phenanthrene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Phenol	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U
Pyrene	UG/KG	502 U	436 U	350.0 U	397.0 U	449.0 U	386.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3

UNITS

VOLATILES

	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Chloromethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Bromomethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Vinyl chloride	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Chloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Methylene chloride	UG/KG 11 J	6 J	11.00 U	12.0 U	58.0	52.0
Acetone	UG/KG 2200 J	13.2 UJ	13.0 J	3200.0 J	4100.0 J	28000.0 J
Carbon Disulfide	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,1-Dichloroethene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,1-Dichloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,2-Dichloroethene(total)	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Chloroform	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,2-Dichloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
2-Butanone	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,1,1-Trichloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	2.00 J	11.8 U
Carbon tetrachloride	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Bromodichloromethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,2-Dichloropropane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
cis-1,3-Dichloropropene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Trichloroethene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Dibromochloromethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,1,2-Trichloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Benzene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
trans-1,3-Dichloropropene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Bromoform	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
4-Methyl-2-pentanone	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
2-Hexanone	UG/KG 11.8 U	13.2 U	10.6 R	12.0 U	13.7 U	11.8 U
Tetrachloroethene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
1,1,2,2-Tetrachloroethane	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Toluene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Chlorobenzene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Ethylbenzene	UG/KG 11.8 U	13.2 U	2.0 J	12.0 U	13.7 U	11.8 U
Styrene	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U
Xylenes (total)	UG/KG 11.8 U	13.2 U	10.6 U	12.0 U	13.7 U	11.8 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3

UNITS

PESTICIDE/PCBS

	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
alpha-BHC	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
beta-BHC	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
delta-BHC	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Lindane (gamma-BHC)	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Heptachlor	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Aldrin	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Heptachlor epoxide	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Endosulfan I	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Dieldrin	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
4,4'-DDE	UG/KG	3.93 UJ	4.36 UJ	1.20 J	3.98 UJ	4.52 UJ
Endrin	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
Endosulfan II	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
4,4'-DDD	UG/KG	3.93 UJ	4.36 UJ	5.70 J	3.98 UJ	4.52 UJ
Endosulfan sulfate	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
4,4'-DDT	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
Methoxychlor	UG/KG	20.2 UJ	22.4 UJ	18.1 UJ	20.5 UJ	23.3 UJ
Endrin ketone	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
Endrin aldehyde	UG/KG	3.93 UJ	4.36 UJ	3.51 UJ	3.98 UJ	4.52 UJ
alpha-Chlordane	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
gamma-Chlordane	UG/KG	2.02 UJ	2.24 UJ	1.81 UJ	2.05 UJ	2.33 UJ
Toxaphene	UG/KG	202 UJ	224 UJ	181.0 UJ	205.0 UJ	233.0 UJ
Aroclor 1016	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Aroclor 1221	UG/KG	79.7 UJ	88.4 UJ	71.3 UJ	80.7 UJ	91.8 UJ
Aroclor 1232	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Aroclor 1242	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Aroclor 1248	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Aroclor 1254	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Aroclor 1260	UG/KG	39.3 UJ	43.6 UJ	35.1 UJ	39.8 UJ	45.2 UJ
Thiodiglycol	MG/KG	NA	NA	NA	NA	NA

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	9503202-01	9503185-02
Date Sampled:	01/20/94	01/09/94	01/09/94	01/08/94	03/26/95	03/23/95
Percent Solids	81.2	89.6	86.2	76.3	NA	84.5

UNITS

SEMIVOLATILES

Compound	UG/KG	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
1,2-Dichlorobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
1,2,4-Trichlorobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
1,3-Dichlorobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
1,4-Dichlorobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
1,4-Dithiane	UG/KG	NA	NA	NA	NA	396 U	10 UJ
1,4-Oxathiane	UG/KG	NA	NA	NA	NA	396 U	10 UJ
2-Chloronaphthalene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2-Chlorophenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2-Methylnaphthalene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2-Methylphenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2-Nitroaniline	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
2-Nitrophenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,4-Dichlorophenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,4-Dimethylphenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,4-Dinitrophenol	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
2,4-Dinitrotoluene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,4,5-Trichlorophenol	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
2,4,6-Trichlorophenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
2,6-Dinitrotoluene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
3-Nitroaniline	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
3,3'-Dichlorobenzidine	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Bromophenyl-phenylether	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Chloro-3-methylphenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Chloroaniline	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Methylphenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
4-Nitroaniline	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
4-Nitrophenol	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
Acenaphthene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Acenaphthylene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Acetophenone	UG/KG	NA	NA	NA	NA	10 UJ	396 U
Anthracene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Benzo[a]anthracene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Benzo[a]pyrene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	9503202-01	9503185-02
Date Sampled:	01/20/94	01/09/94	01/09/94	01/08/94	03/26/95	03/23/95
Percent Solids	81.2	89.6	86.2	76.3	NA	84.5

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Benzo[g,h,i]perylene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Benzo[k]fluoranthene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
bis(2-Chloroethyl) ether	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Butyl benzyl phthalate	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Carbazole	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Chloroacetophenone	UG/KG	NA	NA	NA	NA	10 U	396 U
Chrysene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Dibenzofuran	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Dibenz[a,h]anthracene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Diethylphthalate	UG/KG	406 U	366.0 U	260.0 J	436.0 U	NA	NA
Dimethyl phthalate	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
di-n-Butylphthalate	UG/KG	98 J	366.0 U	383.0 U	436.0 U	NA	NA
di-n-Octylphthalate	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Fluoranthene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Fluorene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Hexachlorobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Hexachlorobutadiene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Hexachlorocyclopentadiene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Hexachloroethane	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Hydroxyacetophenone	UG/KG	NA	NA	NA	NA	50 U	45 J
Indeno[1,2,3-cd]pyrene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Isophorone	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Naphthalene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Nitrobenzene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
N-nitrosodiphenylamine	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Pentachlorophenol	UG/KG	984 U	888.0 U	930.0 U	1060.0 U	NA	NA
Phenanthrene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Phenol	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA
Pyrene	UG/KG	406 U	366.0 U	383.0 U	436.0 U	NA	NA

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	9503202-01	9503185-02
Date Sampled:	01/20/94	01/09/94	01/09/94	01/08/94	03/26/95	03/23/95
Percent Solids	81.2	89.6	86.2	76.3	NA	84.5

UNITS

VOLATILES

	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Chloromethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Bromomethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Vinyl chloride	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Chloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Methylene chloride	12 U	15.0 J	11.0 J	8.00 J	NA	11 U
Acetone	45000	15000.0 J	11.6 UJ	1000.0 J	NA	11 U
Carbon Disulfide	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,1-Dichloroethene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,1-Dichloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,2-Dichloroethene(total)	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Chloroform	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,2-Dichloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
2-Butanone	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,1,1-Trichloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Carbon tetrachloride	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Bromodichloromethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,2-Dichloropropane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
cis-1,3-Dichloropropene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Trichloroethene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Dibromochloromethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,1,2-Trichloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Benzene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
trans-1,3-Dichloropropene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Bromoform	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
4-Methyl-2-pentanone	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
2-Hexanone	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Tetrachloroethene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
1,1,2,2-Tetrachloroethane	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Toluene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Chlorobenzene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Ethylbenzene	12.3 U	11.1 UJ	11.6 UJ	2.00 J	NA	11 U
Styrene	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U
Xylenes (total)	12.3 U	11.1 UJ	11.6 UJ	13.1 U	NA	11 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	9503202-01	9503185-02
Date Sampled:	01/20/94	01/09/94	01/09/94	01/08/94	03/26/95	03/23/95
Percent Solids	81.2	89.6	86.2	76.3	NA	84.5

UNITS

PESTICIDE/PCBS

	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	69-GW15-01	69-GW15 IW-01
alpha-BHC	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
beta-BHC	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
delta-BHC	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Lindane (gamma-BHC)	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Heptachlor	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Aldrin	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Heptachlor epoxide	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Endosulfan I	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Dieldrin	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
4,4'-DDE	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
Endrin	UG/KG	5.51 UJ	1.20 J	3.84 UJ	4.32 UJ	NA
Endosulfan II	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
4,4'-DDD	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
Endosulfan sulfate	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
4,4'-DDT	UG/KG	5.51 UJ	1.60 J	3.84 UJ	4.32 UJ	NA
Methoxychlor	UG/KG	28.4 UJ	18.9 UJ	19.8 UJ	22.3 UJ	NA
Endrin ketone	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
Endrin aldehyde	UG/KG	5.51 UJ	3.67 UJ	3.84 UJ	4.32 UJ	NA
alpha-Chlordane	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
gamma-Chlordane	UG/KG	2.84 UJ	1.89 UJ	1.98 UJ	2.23 UJ	NA
Toxaphene	UG/KG	284 UJ	189.0 UJ	198.0 UJ	223.0 UJ	NA
Aroclor 1016	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Aroclor 1221	UG/KG	112 UJ	74.4 UJ	77.9 UJ	87.8 UJ	NA
Aroclor 1232	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Aroclor 1242	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Aroclor 1248	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Aroclor 1254	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Aroclor 1260	UG/KG	55.1 UJ	36.7 UJ	38.4 UJ	43.2 UJ	NA
Thiodiglycol	MG/KG	NA	NA	NA	NA	50 U
						4.66 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
Laboratory Sample ID:	9503186-01	9503186-08	9503186-06	9503186-07	9503186-10	9503186-02
Date Sampled:	03/21/95	03/22/95	03/22/95	03/22/95	03/21/95	03/21/95
Percent Solids	82	80.3	80.3	83.1	81.4	84.1

UNITS

SEMIVOLATILES

	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
1,2-Dichlorobenzene	UG/KG	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	NA	NA	NA	NA	NA
1,4-Dithiane	UG/KG	403 U	412 U	412 U	396 U	406 U
1,4-Oxathiane	UG/KG	403 U	412 U	412 U	396 U	406 U
2-Chloronaphthalene	UG/KG	NA	NA	NA	NA	NA
2-Chlorophenol	UG/KG	NA	NA	NA	NA	NA
2-Methylnaphthalene	UG/KG	NA	NA	NA	NA	NA
2-Methylphenol	UG/KG	NA	NA	NA	NA	NA
2-Nitroaniline	UG/KG	NA	NA	NA	NA	NA
2-Nitrophenol	UG/KG	NA	NA	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	NA	NA	NA	NA	NA
2,4-Dichlorophenol	UG/KG	NA	NA	NA	NA	NA
2,4-Dimethylphenol	UG/KG	NA	NA	NA	NA	NA
2,4-Dinitrophenol	UG/KG	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	NA	NA	NA	NA	NA
3-Nitroaniline	UG/KG	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	NA	NA	NA	NA	NA
4-Chloroaniline	UG/KG	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	NA	NA	NA	NA	NA
4-Methylphenol	UG/KG	NA	NA	NA	NA	NA
4-Nitroaniline	UG/KG	NA	NA	NA	NA	NA
4-Nitrophenol	UG/KG	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	NA	NA	NA	NA	NA
Acenaphthene	UG/KG	NA	NA	NA	NA	NA
Acenaphthylene	UG/KG	NA	NA	NA	NA	NA
Acetophenone	UG/KG	403 U	412 U	412 U	396 U	406 U
Anthracene	UG/KG	NA	NA	NA	NA	NA
Benzo[a]anthracene	UG/KG	NA	NA	NA	NA	NA
Benzo[a]pyrene	UG/KG	NA	NA	NA	NA	NA

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
Laboratory Sample ID:	9503186-01	9503186-08	9503186-06	9503186-07	9503186-10	9503186-02
Date Sampled:	03/21/95	03/22/95	03/22/95	03/22/95	03/21/95	03/21/95
Percent Solids	82	80.3	80.3	83.1	81.4	84.1

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	NA	NA	NA	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	UG/KG	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	UG/KG	NA	NA	NA	NA	NA	NA
Carbazole	UG/KG	NA	NA	NA	NA	NA	NA
Chloroacetophenone	UG/KG	403 U	412 U	412 U	396 U	406 U	396 U
Chrysene	UG/KG	NA	NA	NA	NA	NA	NA
Dibenzofuran	UG/KG	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	NA	NA	NA	NA	NA	NA
Diethylphthalate	UG/KG	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	UG/KG	NA	NA	NA	NA	NA	NA
di-n-Butylphthalate	UG/KG	NA	NA	NA	NA	NA	NA
di-n-Octylphthalate	UG/KG	NA	NA	NA	NA	NA	NA
Fluoranthene	UG/KG	NA	NA	NA	NA	NA	NA
Fluorene	UG/KG	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	UG/KG	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	UG/KG	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	NA	NA	NA	NA	NA	NA
Hexachloroethane	UG/KG	NA	NA	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG	2010 U	2060 U	2060 U	1980 U	2030 U	1980 U
Indeno[1,2,3-cd]pyrene	UG/KG	NA	NA	NA	NA	NA	NA
Isophorone	UG/KG	NA	NA	NA	NA	NA	NA
Naphthalene	UG/KG	NA	NA	NA	NA	NA	NA
Nitrobenzene	UG/KG	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	NA	NA	NA	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	NA	NA	NA	NA	NA	NA
Pentachlorophenol	UG/KG	NA	NA	NA	NA	NA	NA
Phenanthrene	UG/KG	NA	NA	NA	NA	NA	NA
Phenol	UG/KG	NA	NA	NA	NA	NA	NA
Pyrene	UG/KG	NA	NA	NA	NA	NA	NA

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
Laboratory Sample ID:	9503186-01	9503186-08	9503186-06	9503186-07	9503186-10	9503186-02
Date Sampled:	03/21/95	03/22/95	03/22/95	03/22/95	03/21/95	03/21/95
Percent Solids	82	80.3	80.3	83.1	81.4	84.1

UNITS

VOLATILES

	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
Chloromethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Bromomethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Vinyl chloride	UG/KG	12 U	14 U	12 U	12 U	12 U
Chloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Methylene chloride	UG/KG	12 U	14 U	12 U	12 U	12 U
Acetone	UG/KG	12 U	14 U	12 U	12 U	12 U
Carbon Disulfide	UG/KG	12 U	14 U	12 U	12 U	12 U
1,1-Dichloroethene	UG/KG	12 U	14 U	12 U	12 U	12 U
1,1-Dichloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
1,2-Dichloroethene(total)	UG/KG	2 J	14 U	12 U	12 U	12 U
Chloroform	UG/KG	12 U	14 U	12 U	12 U	12 U
1,2-Dichloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
2-Butanone	UG/KG	12 U	14 U	12 U	12 U	12 U
1,1,1-Trichloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Carbon tetrachloride	UG/KG	12 U	14 U	12 U	12 U	12 U
Bromodichloromethane	UG/KG	12 U	14 U	12 U	12 U	12 U
1,2-Dichloropropane	UG/KG	12 U	14 U	12 U	12 U	12 U
cis-1,3-Dichloropropene	UG/KG	12 U	14 U	12 U	12 U	12 U
Trichloroethene	UG/KG	12 U	14 U	12 U	12 U	12 U
Dibromochloromethane	UG/KG	12 U	14 U	12 U	12 U	12 U
1,1,2-Trichloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Benzene	UG/KG	12 U	14 U	12 U	12 U	12 U
trans-1,3-Dichloropropene	UG/KG	12 U	14 U	12 U	12 U	12 U
Bromoform	UG/KG	12 U	14 U	12 U	12 U	12 U
4-Methyl-2-pentanone	UG/KG	12 U	14 U	12 U	12 U	12 U
2-Hexanone	UG/KG	12 U	14 U	12 U	12 U	12 U
Tetrachloroethene	UG/KG	12 U	14 U	12 U	12 U	12 U
1,1,2,2-Tetrachloroethane	UG/KG	12 U	14 U	12 U	12 U	12 U
Toluene	UG/KG	12 U	14 U	12 U	12 U	12 U
Chlorobenzene	UG/KG	12 U	14 U	12 U	12 U	12 U
Ethylbenzene	UG/KG	12 U	14 U	12 U	12 U	12 U
Styrene	UG/KG	12 U	14 U	12 U	12 U	12 U
Xylenes (total)	UG/KG	12 U	14 U	12 U	12 U	12 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
Laboratory Sample ID:	9503186-01	9503186-08	9503186-06	9503186-07	9503186-10	9503186-02
Date Sampled:	03/21/95	03/22/95	03/22/95	03/22/95	03/21/95	03/21/95
Percent Solids	82	80.3	80.3	83.1	81.4	84.1

UNITS

PESTICIDE/PCBS

	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01
alpha-BHC	UG/KG	NA	NA	NA	NA	NA
beta-BHC	UG/KG	NA	NA	NA	NA	NA
delta-BHC	UG/KG	NA	NA	NA	NA	NA
Lindane (gamma-BHC)	UG/KG	NA	NA	NA	NA	NA
Heptachlor	UG/KG	NA	NA	NA	NA	NA
Aldrin	UG/KG	NA	NA	NA	NA	NA
Heptachlor epoxide	UG/KG	NA	NA	NA	NA	NA
Endosulfan I	UG/KG	NA	NA	NA	NA	NA
Dieldrin	UG/KG	NA	NA	NA	NA	NA
4,4'-DDE	UG/KG	NA	NA	NA	NA	NA
Endrin	UG/KG	NA	NA	NA	NA	NA
Endosulfan II	UG/KG	NA	NA	NA	NA	NA
4,4'-DDD	UG/KG	NA	NA	NA	NA	NA
Endosulfan sulfate	UG/KG	NA	NA	NA	NA	NA
4,4'-DDT	UG/KG	NA	NA	NA	NA	NA
Methoxychlor	UG/KG	NA	NA	NA	NA	NA
Endrin ketone	UG/KG	NA	NA	NA	NA	NA
Endrin aldehyde	UG/KG	NA	NA	NA	NA	NA
alpha-Chlordane	UG/KG	NA	NA	NA	NA	NA
gamma-Chlordane	UG/KG	NA	NA	NA	NA	NA
Toxaphene	UG/KG	NA	NA	NA	NA	NA
Aroclor 1016	UG/KG	NA	NA	NA	NA	NA
Aroclor 1221	UG/KG	NA	NA	NA	NA	NA
Aroclor 1232	UG/KG	NA	NA	NA	NA	NA
Aroclor 1242	UG/KG	NA	NA	NA	NA	NA
Aroclor 1248	UG/KG	NA	NA	NA	NA	NA
Aroclor 1254	UG/KG	NA	NA	NA	NA	NA
Aroclor 1260	UG/KG	NA	NA	NA	NA	NA
Thiodiglycol	MG/KG	4.81 UJ	4.91 UJ	4.91 UJ	4.74 UJ	4.69 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP07-03	69-DA-HP08-03	69-DA-HP09-03
Laboratory Sample ID:	9503186-03	9503185-05	9503186-04
Date Sampled:	03/21/95	03/23/95	03/21/95
Percent Solids	83.2	83.8	82

UNITS

SEMIVOLATILES

1,2-Dichlorobenzene	UG/KG	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	NA	NA	NA
1,4-Dithiane	UG/KG	396 U	396 U	403 U
1,4-Oxathiane	UG/KG	396 U	396 U	403 U
2-Chloronaphthalene	UG/KG	NA	NA	NA
2-Chlorophenol	UG/KG	NA	NA	NA
2-Methylnaphthalene	UG/KG	NA	NA	NA
2-Methylphenol	UG/KG	NA	NA	NA
2-Nitroaniline	UG/KG	NA	NA	NA
2-Nitrophenol	UG/KG	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	NA	NA	NA
2,4-Dichlorophenol	UG/KG	NA	NA	NA
2,4-Dimethylphenol	UG/KG	NA	NA	NA
2,4-Dinitrophenol	UG/KG	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	NA	NA	NA
3-Nitroaniline	UG/KG	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	NA	NA	NA
4-Chloroaniline	UG/KG	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	NA	NA	NA
4-Methylphenol	UG/KG	NA	NA	NA
4-Nitroaniline	UG/KG	NA	NA	NA
4-Nitrophenol	UG/KG	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	NA	NA	NA
Acenaphthene	UG/KG	NA	NA	NA
Acenaphthylene	UG/KG	NA	NA	NA
Acetophenone	UG/KG	396 U	396 U	403 U
Anthracene	UG/KG	NA	NA	NA
Benzo[a]anthracene	UG/KG	NA	NA	NA
Benzo[a]pyrene	UG/KG	NA	NA	NA



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP07-03	69-DA-HP08-03	69-DA-HP09-03
Laboratory Sample ID:	9503186-03	9503185-05	9503186-04
Date Sampled:	03/21/95	03/23/95	03/21/95
Percent Solids	83.2	83.8	82

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG	NA	NA	NA
Benzo[k]fluoranthene	UG/KG	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	NA	NA	NA
Butyl benzyl phthalate	UG/KG	NA	NA	NA
Carbazole	UG/KG	NA	NA	NA
Chloroacetophenone	UG/KG	396 U	396 U	403 U
Chrysene	UG/KG	NA	NA	NA
Dibenzofuran	UG/KG	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	NA	NA	NA
Diethylphthalate	UG/KG	NA	NA	NA
Dimethyl phthalate	UG/KG	NA	NA	NA
di-n-Butylphthalate	UG/KG	NA	NA	NA
di-n-Octylphthalate	UG/KG	NA	NA	NA
Fluoranthene	UG/KG	NA	NA	NA
Fluorene	UG/KG	NA	NA	NA
Hexachlorobenzene	UG/KG	NA	NA	NA
Hexachlorobutadiene	UG/KG	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	NA	NA	NA
Hexachloroethane	UG/KG	NA	NA	NA
Hydroxyacetophenone	UG/KG	1980 U	1980 U	2010 U
Indeno[1,2,3-cd]pyrene	UG/KG	NA	NA	NA
Isophorone	UG/KG	NA	NA	NA
Naphthalene	UG/KG	NA	NA	NA
Nitrobenzene	UG/KG	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	NA	NA	NA
Pentachlorophenol	UG/KG	NA	NA	NA
Phenanthrene	UG/KG	NA	NA	NA
Phenol	UG/KG	NA	NA	NA
Pyrene	UG/KG	NA	NA	NA

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP07-03	69-DA-HP08-03	69-DA-HP09-03
Laboratory Sample ID:	9503186-03	9503185-05	9503186-04
Date Sampled:	03/21/95	03/23/95	03/21/95
Percent Solids	83.2	83.8	82

UNITS

VOLATILES

	69-DA-HP07-03	69-DA-HP08-03	69-DA-HP09-03
Chloromethane	UG/KG 11 U	12 U	12 U
Bromomethane	UG/KG 11 U	12 U	12 U
Vinyl chloride	UG/KG 11 U	12 U	12 U
Chloroethane	UG/KG 11 U	12 U	12 U
Methylene chloride	UG/KG 11 U	12 U	12 U
Acetone	UG/KG 11 U	12 U	12 U
Carbon Disulfide	UG/KG 11 U	12 U	12 U
1,1-Dichloroethene	UG/KG 11 U	12 U	12 U
1,1-Dichloroethane	UG/KG 11 U	12 U	12 U
1,2-Dichloroethene(total)	UG/KG 11 U	12 U	12 U
Chloroform	UG/KG 11 U	12 U	12 U
1,2-Dichloroethane	UG/KG 11 U	12 U	12 U
2-Butanone	UG/KG 11 U	12 U	12 U
1,1,1-Trichloroethane	UG/KG 11 U	12 U	12 U
Carbon tetrachloride	UG/KG 11 U	12 U	12 U
Bromodichloromethane	UG/KG 11 U	12 U	12 U
1,2-Dichloropropane	UG/KG 11 U	12 U	12 U
cis-1,3-Dichloropropene	UG/KG 11 U	12 U	12 U
Trichloroethene	UG/KG 11 U	12 U	12 U
Dibromochloromethane	UG/KG 11 U	12 U	12 U
1,1,2-Trichloroethane	UG/KG 11 U	12 U	12 U
Benzene	UG/KG 11 U	12 U	12 U
trans-1,3-Dichloropropene	UG/KG 11 U	12 U	12 U
Bromoform	UG/KG 11 U	12 U	12 U
4-Methyl-2-pentanone	UG/KG 11 U	12 U	12 U
2-Hexanone	UG/KG 11 U	12 U	12 U
Tetrachloroethene	UG/KG 11 U	12 U	12 U
1,1,2,2-Tetrachloroethane	UG/KG 11 U	12 U	12 U
Toluene	UG/KG 11 U	12 U	12 U
Chlorobenzene	UG/KG 11 U	12 U	12 U
Ethylbenzene	UG/KG 11 U	12 U	12 U
Styrene	UG/KG 11 U	12 U	12 U
Xylenes (total)	UG/KG 11 U	12 U	12 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP07-03	69-DA-HP08-03	69-DA-HP09-03
Laboratory Sample ID:	9503186-03	9503185-05	9503186-04
Date Sampled:	03/21/95	03/23/95	03/21/95
Percent Solids	83.2	83.8	82

UNITS

PESTICIDE/PCBS

alpha-BHC	UG/KG	NA	NA	NA
beta-BHC	UG/KG	NA	NA	NA
delta-BHC	UG/KG	NA	NA	NA
Lindane (gamma-BHC)	UG/KG	NA	NA	NA
Heptachlor	UG/KG	NA	NA	NA
Aldrin	UG/KG	NA	NA	NA
Heptachlor epoxide	UG/KG	NA	NA	NA
Endosulfan I	UG/KG	NA	NA	NA
Dieldrin	UG/KG	NA	NA	NA
4,4'-DDE	UG/KG	NA	NA	NA
Endrin	UG/KG	NA	NA	NA
Endosulfan II	UG/KG	NA	NA	NA
4,4'-DDD	UG/KG	NA	NA	NA
Endosulfan sulfate	UG/KG	NA	NA	NA
4,4'-DDT	UG/KG	NA	NA	NA
Methoxychlor	UG/KG	NA	NA	NA
Endrin ketone	UG/KG	NA	NA	NA
Endrin aldehyde	UG/KG	NA	NA	NA
alpha-Chlordane	UG/KG	NA	NA	NA
gamma-Chlordane	UG/KG	NA	NA	NA
Toxaphene	UG/KG	NA	NA	NA
Aroclor 1016	UG/KG	NA	NA	NA
Aroclor 1221	UG/KG	NA	NA	NA
Aroclor 1232	UG/KG	NA	NA	NA
Aroclor 1242	UG/KG	NA	NA	NA
Aroclor 1248	UG/KG	NA	NA	NA
Aroclor 1254	UG/KG	NA	NA	NA
Aroclor 1260	UG/KG	NA	NA	NA
Thiodiglycol	MG/KG	4.74 UJ	4.7 UJ	4.8 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>SEMIVOLATILES</u>						
1,2-Dichlorobenzene	UG/KG	350 U	502 U	ND	ND	0/10
1,2,4-Trichlorobenzene	UG/KG	350 U	502 U	ND	ND	0/10
1,3-Dichlorobenzene	UG/KG	350 U	502 U	ND	ND	0/10
1,4-Dichlorobenzene	UG/KG	350 U	502 U	ND	ND	0/10
1,4-Dithiane	UG/KG	10 UJ	412 U	ND	ND	0/11
1,4-Oxathiane	UG/KG	10 UJ	412 U	ND	ND	0/11
2-Chloronaphthalene	UG/KG	350 U	502 U	ND	ND	0/10
2-Chlorophenol	UG/KG	350 U	502 U	ND	ND	0/10
2-Methylnaphthalene	UG/KG	350 U	502 U	ND	ND	0/10
2-Methylphenol	UG/KG	350 U	502 U	ND	ND	0/10
2-Nitroaniline	UG/KG	848 U	1220 U	ND	ND	0/10
2-Nitrophenol	UG/KG	350 U	502 U	ND	ND	0/10
2,2'-oxybis-(1-chloropropane)	UG/KG	350 U	502 U	ND	ND	0/10
2,4-Dichlorophenol	UG/KG	350 U	502 U	ND	ND	0/10
2,4-Dimethylphenol	UG/KG	350 U	502 U	ND	ND	0/10
2,4-Dinitrophenol	UG/KG	848 U	1220 U	ND	ND	0/10
2,4-Dinitrotoluene	UG/KG	350 U	502 U	ND	ND	0/10
2,4,5-Trichlorophenol	UG/KG	848 U	1220 U	ND	ND	0/10
2,4,6-Trichlorophenol	UG/KG	350 U	502 U	ND	ND	0/10
2,6-Dinitrotoluene	UG/KG	350 U	502 U	ND	ND	0/10
3-Nitroaniline	UG/KG	848 U	1220 U	ND	ND	0/10
3,3'-Dichlorobenzidine	UG/KG	350 U	502 UJ	ND	ND	0/10
4-Bromophenyl-phenylether	UG/KG	350 U	502 U	ND	ND	0/10
4-Chloro-3-methylphenol	UG/KG	350 U	502 U	ND	ND	0/10
4-Chloroaniline	UG/KG	350 U	502 U	ND	ND	0/10
4-Chlorophenyl phenyl ether	UG/KG	350 U	502 U	ND	ND	0/10
4-Methylphenol	UG/KG	350 U	502 U	ND	ND	0/10
4-Nitroaniline	UG/KG	848 U	1220 U	ND	ND	0/10
4-Nitrophenol	UG/KG	848 U	1220 U	ND	ND	0/10
4,6-Dinitro-2-methylphenol	UG/KG	848 U	1220 U	ND	ND	0/10
Acenaphthene	UG/KG	350 U	502 U	ND	ND	0/10
Acenaphthylene	UG/KG	350 U	502 U	ND	ND	0/10
Acetophenone	UG/KG	10 UJ	412 U	ND	ND	0/11
Anthracene	UG/KG	350 U	502 U	ND	ND	0/10
Benzo[a]anthracene	UG/KG	350 U	502 U	ND	ND	0/10
Benzo[a]pyrene	UG/KG	350 U	502 U	ND	ND	0/10

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	UNITS						
	<u>SEMIVOLATILES Cont.</u>						
	Benzo[b]fluoranthene	UG/KG	350 U	502 U	ND	ND	0/10
	Benzo[g,h,i]perylene	UG/KG	350 U	502 U	ND	ND	0/10
	Benzo[k]fluoranthene	UG/KG	350 U	502 U	ND	ND	0/10
	bis(2-Chloroethoxy) methane	UG/KG	350 U	502 U	ND	ND	0/10
	bis(2-Chloroethyl) ether	UG/KG	350 U	502 U	ND	ND	0/10
	bis(2-Ethylhexyl)phthalate	UG/KG	350 U	502 U	53 J	53 J	69-GW11-02 1/10
	Butyl benzyl phthalate	UG/KG	350 U	502 U	ND	ND	0/10
	Carbazole	UG/KG	350 U	502 U	ND	ND	0/10
	Chloroacetophenone	UG/KG	10 U	412 U	ND	ND	0/11
	Chrysene	UG/KG	350 U	502 U	ND	ND	0/10
	Dibenzofuran	UG/KG	350 U	502 U	ND	ND	0/10
	Dibenz[a,h]anthracene	UG/KG	350 U	502 U	ND	ND	0/10
	Diethylphthalate	UG/KG	350 U	502 U	260 J	260 J	69-GW02DW-03 1/10
	Dimethyl phthalate	UG/KG	350 U	502 U	ND	ND	0/10
	di-n-Butylphthalate	UG/KG	350 U	436 U	53 J	120 J	69-GW09-05 5/10
	di-n-Octylphthalate	UG/KG	350 U	502 U	ND	ND	0/10
	Fluoranthene	UG/KG	350 U	502 U	ND	ND	0/10
	Fluorene	UG/KG	350 U	502 U	ND	ND	0/10
	Hexachlorobenzene	UG/KG	350 U	502 U	ND	ND	0/10
	Hexachlorobutadiene	UG/KG	350 U	502 U	ND	ND	0/10
	Hexachlorocyclopentadiene	UG/KG	350 U	502 U	ND	ND	0/10
	Hexachloroethane	UG/KG	350 U	502 U	ND	ND	0/10
	Hydroxyacetophenone	UG/KG	50 U	2060 U	45 J	45 J	69-GW15 IW-01 1/11
	Indeno[1,2,3-cd]pyrene	UG/KG	350 U	502 U	ND	ND	0/10
	Isophorone	UG/KG	350 U	502 U	ND	ND	0/10
	Naphthalene	UG/KG	350 U	502 U	ND	ND	0/10
	Nitrobenzene	UG/KG	350 U	502 U	ND	ND	0/10
	N-Nitroso-di-n-propylamine	UG/KG	350 U	502 U	ND	ND	0/10
	N-nitrosodiphenylamine	UG/KG	350 U	502 U	ND	ND	0/10
	Pentachlorophenol	UG/KG	848 U	1220 U	ND	ND	0/10
	Phenanthrene	UG/KG	350 U	502 U	ND	ND	0/10
	Phenol	UG/KG	350 U	502 U	ND	ND	0/10
	Pyrene	UG/KG	350 U	502 U	ND	ND	0/10

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/KG	10.6 U	14 U	ND	ND	0/20
Bromomethane	UG/KG	10.6 U	14 U	ND	ND	0/20
Vinyl chloride	UG/KG	10.6 U	14 U	ND	ND	0/20
Chloroethane	UG/KG	10.6 U	14 U	ND	ND	0/20
Methylene chloride	UG/KG	11 U	14 U	6 J	58	69-GW11-02 7/20
Acetone	UG/KG	11 U	14 U	13 J	45000	69-GW12-01 8/20
Carbon Disulfide	UG/KG	10.6 U	14 U	ND	ND	0/20
1,1-Dichloroethene	UG/KG	10.6 U	14 U	ND	ND	0/20
1,1-Dichloroethane	UG/KG	10.6 U	14 U	ND	ND	0/20
1,2-Dichloroethene(total)	UG/KG	10.6 U	14 U	2 J	2 J	69-DA-HP01-03 1/20
Chloroform	UG/KG	10.6 U	14 U	ND	ND	0/20
1,2-Dichloroethane	UG/KG	10.6 U	14 U	ND	ND	0/20
2-Butanone	UG/KG	10.6 U	14 U	ND	ND	0/20
1,1,1-Trichloroethane	UG/KG	10.6 U	14 U	2 J	2 J	69-GW11-02 1/20
Carbon tetrachloride	UG/KG	10.6 U	14 U	ND	ND	0/20
Bromodichloromethane	UG/KG	10.6 U	14 U	ND	ND	0/20
1,2-Dichloropropane	UG/KG	10.6 U	14 U	ND	ND	0/20
cis-1,3-Dichloropropene	UG/KG	10.6 U	14 U	ND	ND	0/20
Trichloroethene	UG/KG	10.6 U	14 U	ND	ND	0/20
Dibromochloromethane	UG/KG	10.6 U	14 U	ND	ND	0/20
1,1,2-Trichloroethane	UG/KG	10.6 U	14 U	ND	ND	0/20
Benzene	UG/KG	10.6 U	14 U	ND	ND	0/20
trans-1,3-Dichloropropene	UG/KG	10.6 U	14 U	ND	ND	0/20
Bromoform	UG/KG	10.6 U	14 U	ND	ND	0/20
4-Methyl-2-pentanone	UG/KG	10.6 U	14 U	ND	ND	0/20
2-Hexanone	UG/KG	11 U	14 U	ND	ND	0/19
Tetrachloroethene	UG/KG	10.6 U	14 U	ND	ND	0/20
1,1,2,2-Tetrachloroethane	UG/KG	10.6 U	14 U	ND	ND	0/20
Toluene	UG/KG	10.6 U	14 U	ND	ND	0/20
Chlorobenzene	UG/KG	10.6 U	14 U	ND	ND	0/20
Ethylbenzene	UG/KG	11 U	14 U	2 J	2 J	69-GW12DW-01 2/20
Styrene	UG/KG	10.6 U	14 U	ND	ND	0/20
Xylenes (total)	UG/KG	10.6 U	14 U	ND	ND	0/20

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
beta-BHC	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
delta-BHC	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Lindane (gamma-BHC)	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Heptachlor	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Aldrin	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Heptachlor epoxide	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Endosulfan I	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Dieldrin	UG/KG	3.51 UJ	5.51 UJ	ND	ND	0/10
4,4'-DDE	UG/KG	3.67 UJ	5.51 UJ	1.2 J	1.2 J	69-GW10-01 1/10
Endrin	UG/KG	3.51 UJ	5.51 UJ	1.2 J	1.2 J	69-GW02DW-01 1/10
Endosulfan II	UG/KG	3.51 UJ	5.51 UJ	ND	ND	0/10
4,4'-DDD	UG/KG	3.67 UJ	5.51 UJ	5.7 J	5.7 J	69-GW10-01 1/10
Endosulfan sulfate	UG/KG	3.51 UJ	5.51 UJ	ND	ND	0/10
4,4'-DDT	UG/KG	3.51 UJ	5.51 UJ	1.6 J	1.6 J	69-GW02DW-01 1/10
Methoxychlor	UG/KG	18.1 UJ	28.4 UJ	ND	ND	0/10
Endrin ketone	UG/KG	3.51 UJ	5.51 UJ	ND	ND	0/10
Endrin aldehyde	UG/KG	3.51 UJ	5.51 UJ	ND	ND	0/10
alpha-Chlordane	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
gamma-Chlordane	UG/KG	1.81 UJ	2.84 UJ	ND	ND	0/10
Toxaphene	UG/KG	181 UJ	284 UJ	ND	ND	0/10
Aroclor 1016	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Aroclor 1221	UG/KG	71.3 UJ	112 UJ	ND	ND	0/10
Aroclor 1232	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Aroclor 1242	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Aroclor 1248	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Aroclor 1254	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Aroclor 1260	UG/KG	35.1 UJ	55.1 UJ	ND	ND	0/10
Thiodiglycol	MG/KG	4.66 UJ	50 U	ND	ND	0/11

**APPENDIX O.4**  
**SITE 69 SUBSURFACE SOIL INORGANICS**

---



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04	
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A	
Date Sampled:			01/09/94	01/09/94	01/07/94	01/07/94	
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3	
	UNITS						
Aluminum	MG/KG	2460	9990	2380.0	6080.0	1980.0	4130.0
Antimony	MG/KG	1.9 U	2.1 U	1.68 U	1.90 U	2.20 U	1.90 U
Arsenic	MG/KG	0.69 U	2.9	0.616 U	1.15	0.790 U	0.680 U
Barium	MG/KG	8.7	14.6	3.80	7.06	6.50	5.60
Beryllium	MG/KG	0.31 U	0.36	0.274 U	0.310 U	0.350 U	0.300 U
Cadmium	MG/KG	0.57 U	0.74	0.499 U	0.565 U	0.650 U	0.560 U
Calcium	MG/KG	29.6 U	688	29.2	59.7	73.3	72.6
Chromium	MG/KG	3.6 J	17.7	1.56 U	7.00	3.30	6.80
Cobalt	MG/KG	4.6 U	5.1 U	4.12 U	4.66 U	5.30 U	4.50 U
Copper	MG/KG	3.8 U	5.1	3.44 U	3.89 U	4.40 U	3.80 U
Iron	MG/KG	754	19900	1450.0	3880.0	1030.0	905.0
Lead	MG/KG	3	6	1.78	4.28	3.20 J	4.30 J
Magnesium	MG/KG	88.6	574	63.0	150.0	94.6	139.0
Manganese	MG/KG	3.3	39	20.7	3.33	5.60	4.00
Mercury	MG/KG	0.04	0.04 U	0.052 U	0.070	0.070 U	0.060 U
Nickel	MG/KG	3.9	3.9	2.89 U	3.27 U	3.70 U	3.20 U
Potassium	MG/KG	71 UJ	516 J	106.0 UJ	72.1 UJ	149.0	185.0
Selenium	MG/KG	0.59 UJ	0.65 U	0.537 UJ	0.608 UJ	0.680 UJ	0.590 UJ
Silver	MG/KG	0.43 J	0.1 UJ	0.085 UJ	0.096 UJ	0.110 UJ	0.090 UJ
Sodium	MG/KG	44 U	130	40.3 U	45.7 U	51.8 UJ	44.5 UJ
Thallium	MG/KG	1.1 U	1.2 U	0.977 U	1.10 U	1.30 U	1.10 U
Vanadium	MG/KG	3.9 U	22.6	3.52 U	11.8	4.50 U	4.40
Zinc	MG/KG	3.4	13.7	4.70 U	4.81 U	3.10 U	3.20 U
Total Cyanide	MG/KG	2.4	2.6	1.06 UJ	1.20 UJ	1.40 UJ	1.20 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	
Date Sampled:		01/09/94	01/09/94	01/08/94	
Percent Solids	81.2	89.6	86.2	76.3	
	UNITS				
Aluminum	MG/KG	1020	1610.0	2610.0	832.0
Antimony	MG/KG	1.9 U	1.76 U	1.83 U	2.07 U
Arsenic	MG/KG	0.71 UJ	0.647 UJ	0.673 UJ	0.760 U
Barium	MG/KG	3.4 U	6.80	3.18 U	3.59 U
Beryllium	MG/KG	0.32 U	0.288 U	0.299 U	0.338 U
Cadmium	MG/KG	0.59 U	0.524 U	0.545 U	0.616 U
Calcium	MG/KG	30.8 U	170.0	37.5	33.6
Chromium	MG/KG	2.8	1.76	4.50	1.93 U
Cobalt	MG/KG	4.8 U	4.33 U	4.50 U	5.08 U
Copper	MG/KG	4 U	3.62 U	3.76 U	4.25 U
Iron	MG/KG	621	1100.0	3370.0	354.0
Lead	MG/KG	3.2	4.63	2.40	3.50
Magnesium	MG/KG	26.9	52.8	100.0	29.7
Manganese	MG/KG	1.6	2.52	1.67	1.93
Mercury	MG/KG	0.06 UJ	0.086 U	0.052 U	0.077 U
Nickel	MG/KG	3.4	3.04 U	3.16 U	3.56 U
Potassium	MG/KG	73.9 U	67.0 UJ	69.6 UJ	131.0 UJ
Selenium	MG/KG	0.62 U	0.565 UJ	0.587 UJ	0.663 UJ
Silver	MG/KG	0.1 UJ	0.089 UJ	0.093 UJ	0.105 UJ
Sodium	MG/KG	46.8 U	42.4 U	44.1 U	49.8 U
Thallium	MG/KG	1.1 U	1.03 U	1.07 U	1.20 U
Vanadium	MG/KG	4.1 U	3.70 U	11.8	4.35 U
Zinc	MG/KG	3.5	4.22 U	3.74 U	7.08 U
Total Cyanide	MG/KG	1.2	1.12 UJ	1.16 UJ	1.31 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:

Laboratory Sample ID:

Date Sampled:

Percent Solids

		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	UNITS						
Aluminum	MG/KG	NA	NA	832	9990	69-GW09-05	10/10
Antimony	MG/KG	1.68 U	2.2 U	ND	ND		0/10
Arsenic	MG/KG	0.616 U	0.79 U	1.15	2.9	69-GW09-05	2/10
Barium	MG/KG	3.18 U	3.59 U	3.8	14.6	69-GW09-05	7/10
Beryllium	MG/KG	0.274 U	0.35 U	0.36	0.36	69-GW09-05	1/10
Cadmium	MG/KG	0.499 U	0.65 U	0.74	0.74	69-GW09-05	1/10
Calcium	MG/KG	29.6 U	30.8 U	29.2	688	69-GW09-05	8/10
Chromium	MG/KG	1.56 U	1.93 U	1.76	17.7	69-GW09-05	8/10
Cobalt	MG/KG	4.12 U	5.3 U	ND	ND		0/10
Copper	MG/KG	3.44 U	4.4 U	5.1	5.1	69-GW09-05	1/10
Iron	MG/KG	NA	NA	354	19900	69-GW09-05	10/10
Lead	MG/KG	NA	NA	1.78	6	69-GW09-05	10/10
Magnesium	MG/KG	NA	NA	26.9	574	69-GW09-05	10/10
Manganese	MG/KG	NA	NA	1.6	39	69-GW09-05	10/10
Mercury	MG/KG	0.04 U	0.086 U	0.04	0.07	69-GW11-02	2/10
Nickel	MG/KG	2.89 U	3.7 U	3.4	3.9	69-GW09-05	3/10
Potassium	MG/KG	67 UJ	131 UJ	149	516 J	69-GW09-05	3/10
Selenium	MG/KG	0.537 UJ	0.68 UJ	ND	ND		0/10
Silver	MG/KG	0.085 UJ	0.11 UJ	0.43 J	0.43 J	69-GW09-02	1/10
Sodium	MG/KG	40.3 U	51.8 UJ	130	130	69-GW09-05	1/10
Thallium	MG/KG	0.977 U	1.3 U	ND	ND		0/10
Vanadium	MG/KG	3.52 U	4.5 U	4.4	22.6	69-GW09-05	4/10
Zinc	MG/KG	3.1 U	7.08 U	3.4	13.7	69-GW09-05	3/10
Total Cyanide	MG/KG	1.06 UJ	1.4 UJ	1.2	2.6	69-GW09-05	3/10

**APPENDIX O.5**  
**SITE 69 SHALLOW GROUNDWATER ORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01	
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A	
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94	
	UNITS						
SEMIVOLATILES							
1,2-Dichlorobenzene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
1,2,4-Trichlorobenzene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
1,3-Dichlorobenzene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
1,4-Dichlorobenzene	UG/L	14.0 U	NA	17.0 U	2.00 J	NA	11.0 U
2-Chloronaphthalene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2-Chlorophenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2-Methylnaphthalene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2-Methylphenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2-Nitroaniline	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
2-Nitrophenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,4-Dichlorophenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,4-Dimethylphenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,4-Dinitrophenol	UG/L	35.0 U	NA	42.5 UJ	30.0 U	NA	27.5 UJ
2,4-Dinitrotoluene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,4,5-Trichlorophenol	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
2,4,6-Trichlorophenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
2,6-Dinitrotoluene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
3-Nitroaniline	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
3,3'-Dichlorobenzidine	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Bromophenyl-phenylether	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Chloro-3-methylphenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Chloroaniline	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Chlorophenyl phenyl ether	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Methylphenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
4-Nitroaniline	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
4-Nitrophenol	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
4,6-Dinitro-2-methylphenol	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
Acenaphthene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Acenaphthylene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Anthracene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Benzo[a]anthracene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Benzo[a]pyrene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Benzo[g,h,i]perylene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Benzo[k]fluoranthene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
bis(2-Chloroethoxy) methane	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
bis(2-Chloroethyl) ether	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
bis(2-Ethylhexyl)phthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Butyl benzyl phthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Carbazole	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Chrysene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Dibenzofuran	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Dibenz[a,h]anthracene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Diethylphthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Dimethyl phthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
di-n-Butylphthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.00 U
di-n-Octylphthalate	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Fluoranthene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Fluorene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Hexachlorobenzene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Hexachlorobutadiene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Hexachlorocyclopentadiene	UG/L	14.0 U	NA	17.0 UJ	12.0 U	NA	11.0 UJ
Hexachloroethane	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Indeno[1,2,3-cd]pyrene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Isophorone	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Naphthalene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Nitrobenzene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
N-Nitroso-di-n-propylamine	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
N-nitrosodiphenylamine	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Pentachlorophenol	UG/L	35.0 U	NA	42.5 U	30.0 U	NA	27.5 U
Phenanthrene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Phenol	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Pyrene	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94
	UNITS					
<u>VOLATILES</u>						
Chloromethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Bromomethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Vinyl chloride	UG/L	10.0 U	NA	31.0 J	10.0 U	10.0 U
Chloroethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Methylene chloride	UG/L	10.00 U	NA	10.00 U	10.00 U	10.00 U
Acetone	UG/L	10.0 UJ	NA	10.00 UJ	10.00 UJ	10.0 UJ
Carbon Disulfide	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,1-Dichloroethene	UG/L	10.0 U	NA	10.0 U	1.00 J	10.0 U
1,1-Dichloroethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,2-Dichloroethene(total)	UG/L	10.0 U	NA	2400.0	630.0	32.0 J
Chloroform	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,2-Dichloroethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
2-Butanone	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,1,1-Trichloroethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Carbon tetrachloride	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Bromodichloromethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,2-Dichloropropane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
cis-1,3-Dichloropropene	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Trichloroethene	UG/L	10.0 U	NA	23.0 J	1.00 J	10.0 U
Dibromochloromethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
1,1,2-Trichloroethane	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Benzene	UG/L	10.0 U	NA	10.0 U	1.00 J	10.0 U
trans-1,3-Dichloropropene	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Bromoform	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
4-Methyl-2-pentanone	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
2-Hexanone	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Tetrachloroethene	UG/L	10.0 U	NA	1.00 J	10.0 U	10.0 U
1,1,2,2-Tetrachloroethane	UG/L	10.0 U	NA	22.0 J	10.0 U	2.00 J
Toluene	UG/L	10.0 U	NA	1.00 J	4.00 J	10.0 U
Chlorobenzene	UG/L	10.0 U	NA	10.0 U	25.0 J	10.0 U
Ethylbenzene	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Styrene	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U
Xylenes (total)	UG/L	10.0 U	NA	10.0 U	10.0 U	10.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94
	UNITS					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
beta-BHC	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
delta-BHC	UG/L	NA	0.05 U	0.050 UJ	NA	2.3
Lindane (gamma-BHC)	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Heptachlor	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Aldrin	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Heptachlor epoxide	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Endosulfan I	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Dieldrin	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
4,4'-DDE	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
Endrin	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
Endosulfan II	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
4,4'-DDD	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
Endosulfan sulfate	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
4,4'-DDT	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
Methoxychlor	UG/L	NA	0.5 U	0.500 UJ	NA	0.5 U
Endrin ketone	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
Endrin aldehyde	UG/L	NA	0.1 U	0.100 UJ	NA	0.1 U
alpha-Chlordane	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
gamma-Chlordane	UG/L	NA	0.05 U	0.050 UJ	NA	0.05 U
Toxaphene	UG/L	NA	5 U	5.00 UJ	NA	5 U
Aroclor 1016	UG/L	NA	1 U	1.00 UJ	NA	1 U
Aroclor 1221	UG/L	NA	2 U	2.00 UJ	NA	2 U
Aroclor 1232	UG/L	NA	1 U	1.00 UJ	NA	1 U
Aroclor 1242	UG/L	NA	1 U	1.00 UJ	NA	1 U
Aroclor 1248	UG/L	NA	1 U	1.00 UJ	NA	1 U
Aroclor 1254	UG/L	NA	1 U	1.00 UJ	NA	1 U
Aroclor 1260	UG/L	NA	1 U	1.00 UJ	NA	1 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01	
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A	
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94	
	<u>UNITS</u>						
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Chloroacetophenone	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
Hydroxyacetophenone	UG/L	70.0 U	NA	85.0 U	60.0 U	NA	55.0 U
Bis(2'-chloroethyl)disulfide	UG/L	70.0 U	NA	85.0 U	60.0 U	NA	55.0 U
Bis(2'-chloroethyl)trisulfide	UG/L	70.0 U	NA	85.0 U	60.0 U	NA	55.0 U
1,4-Dithiane	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
1,4-Oxathiane	UG/L	14.0 U	NA	17.0 U	12.0 U	NA	11.0 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	UG/L	25.0 U	NA	25.0 UJ	25.0 U	NA	25.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	UNITS					
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
1,2,4-Trichlorobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
1,3-Dichlorobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
1,4-Dichlorobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2-Chloronaphthalene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2-Chlorophenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2-Methylnaphthalene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2-Methylphenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2-Nitroaniline	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
2-Nitrophenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,2'-oxybis-(1-chloropropane)	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,4-Dichlorophenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,4-Dimethylphenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,4-Dinitrophenol	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
2,4-Dinitrotoluene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,4,5-Trichlorophenol	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
2,4,6-Trichlorophenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
2,6-Dinitrotoluene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
3-Nitroaniline	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
3,3'-Dichlorobenzidine	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Bromophenyl-phenylether	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Chloro-3-methylphenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Chloroaniline	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Chlorophenyl phenyl ether	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Methylphenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
4-Nitroaniline	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
4-Nitrophenol	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
4,6-Dinitro-2-methylphenol	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	34.8 U
Acenaphthene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
Acenaphthylene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
Anthracene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
Benzo[a]anthracene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U
Benzo[a]pyrene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	13.9 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94

UNITS

<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Benzo[g,h,i]perylene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Benzo[k]fluoranthene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
bis(2-Chloroethoxy) methane	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
bis(2-Chloroethyl) ether	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
bis(2-Ethylhexyl)phthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Butyl benzyl phthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Carbazole	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Chrysene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Dibenzofuran	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Dibenz[a,h]anthracene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Diethylphthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Dimethyl phthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
di-n-Butylphthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	12.00 U 13.9 U
di-n-Octylphthalate	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Fluoranthene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Fluorene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Hexachlorobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Hexachlorobutadiene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Hexachlorocyclopentadiene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Hexachloroethane	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Indeno[1,2,3-cd]pyrene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Isophorone	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Naphthalene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Nitrobenzene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
N-Nitroso-di-n-propylamine	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
N-nitrosodiphenylamine	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Pentachlorophenol	UG/L	35.2 U	30.1 U	30.0 U	37.2 U	27.9 U 34.8 U
Phenanthrene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Phenol	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U
Pyrene	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U 13.9 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	UNITS					
<b><u>VOLATILES</u></b>						
Chloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromomethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Vinyl chloride	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Chloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Methylene chloride	UG/L	10.00 U	10.00 U	10.00 U	10.00 U	10.00 U
Acetone	UG/L	34.0 U	10.00 U	10.00 U	12.0 U	14.0 UJ
Carbon Disulfide	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	1.00 J
1,1-Dichloroethene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-Dichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloroethene(total)	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Chloroform	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Butanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,1-Trichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon tetrachloride	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromodichloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloropropane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
cis-1,3-Dichloropropene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Trichloroethene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Dibromochloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2-Trichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trans-1,3-Dichloropropene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromoform	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Methyl-2-pentanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Hexanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Tetrachloroethene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2,2-Tetrachloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Toluene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Chlorobenzene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Ethylbenzene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Styrene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Xylenes (total)	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	UNITS					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/L	0.070 UJ	0.055 UJ	0.050 UJ	0.060 UJ	0.070 UJ
beta-BHC	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
delta-BHC	UG/L	0.070 UJ	0.055 UJ	0.050 UJ	0.060 UJ	0.070 UJ
Lindane (gamma-BHC)	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Heptachlor	UG/L	0.070 UJ	0.055 U	0.060 U	0.060 UJ	0.070 UJ
Aldrin	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Heptachlor epoxide	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Endosulfan I	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Dieldrin	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
4,4'-DDE	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
Endrin	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
Endosulfan II	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
4,4'-DDD	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
Endosulfan sulfate	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
4,4'-DDT	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
Methoxychlor	UG/L	0.700 UJ	0.550 U	0.500 U	0.600 UJ	0.700 UJ
Endrin ketone	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
Endrin aldehyde	UG/L	0.140 UJ	0.110 U	0.100 U	0.120 UJ	0.140 UJ
alpha-Chlordane	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
gamma-Chlordane	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Toxaphene	UG/L	7.00 UJ	5.50 U	5.00 U	6.00 UJ	7.00 UJ
Aroclor 1016	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1221	UG/L	2.80 UJ	2.20 U	2.00 U	2.40 UJ	2.80 UJ
Aroclor 1232	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1242	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1248	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1254	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1260	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A	
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94	
	UNITS						
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U	13.9 U
Chloroacetophenone	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U	13.9 U
Hydroxyacetophenone	UG/L	70.5 U	60.2 U	60.0 U	74.5 U	55.8 U	69.5 U
Bis(2'-chloroethyl)disulfide	UG/L	70.5 U	60.2 U	60.0 U	74.5 U	55.8 U	65 U
Bis(2'-chloroethyl)trisulfide	UG/L	70.5 U	60.2 U	60.0 U	74.5 U	55.8 U	65 U
1,4-Dithiane	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U	13.9 U
1,4-Oxathiane	UG/L	14.1 U	12.0 U	12.0 U	14.9 U	11.2 U	13.9 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	UG/L	25 U	25 U	25.0 U	25.0 U	25.0 U	25.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

SEMIVOLATILES

1,2-Dichlorobenzene	UG/L	12.8 U	50.0 U
1,2,4-Trichlorobenzene	UG/L	12.8 U	50.0 U
1,3-Dichlorobenzene	UG/L	12.8 U	50.0 U
1,4-Dichlorobenzene	UG/L	12.8 U	50.0 U
2-Chloronaphthalene	UG/L	12.8 U	50.0 U
2-Chlorophenol	UG/L	12.8 U	50.0 U
2-Methylnaphthalene	UG/L	12.8 U	50.0 U
2-Methylphenol	UG/L	12.8 U	50.0 U
2-Nitroaniline	UG/L	32.0 U	125.0 U
2-Nitrophenol	UG/L	12.8 U	50.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	12.8 U	50.0 U
2,4-Dichlorophenol	UG/L	12.8 U	50.0 U
2,4-Dimethylphenol	UG/L	12.8 U	50.0 U
2,4-Dinitrophenol	UG/L	32.0 U	125.0 U
2,4-Dinitrotoluene	UG/L	12.8 U	50.0 U
2,4,5-Trichlorophenol	UG/L	32.0 U	125.0 U
2,4,6-Trichlorophenol	UG/L	12.8 U	50.0 U
2,6-Dinitrotoluene	UG/L	12.8 U	50.0 U
3-Nitroaniline	UG/L	32.0 U	125.0 U
3,3'-Dichlorobenzidine	UG/L	12.8 U	50.0 U
4-Bromophenyl-phenylether	UG/L	12.8 U	50.0 U
4-Chloro-3-methylphenol	UG/L	12.8 U	50.0 U
4-Chloroaniline	UG/L	12.8 U	50.0 U
4-Chlorophenyl phenyl ether	UG/L	12.8 U	50.0 U
4-Methylphenol	UG/L	12.8 U	50.0 U
4-Nitroaniline	UG/L	32.0 U	125.0 U
4-Nitrophenol	UG/L	32.0 U	125.0 U
4,6-Dinitro-2-methylphenol	UG/L	32.0 U	125.0 U
Acenaphthene	UG/L	12.8 U	50.0 U
Acenaphthylene	UG/L	12.8 U	50.0 U
Anthracene	UG/L	12.8 U	50.0 U
Benzo[a]anthracene	UG/L	12.8 U	50.0 U
Benzo[a]pyrene	UG/L	12.8 U	50.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	12.8 U	50.0 U
Benzo[g,h,i]perylene	UG/L	12.8 U	50.0 U
Benzo[k]fluoranthene	UG/L	12.8 U	50.0 U
bis(2-Chloroethoxy) methane	UG/L	12.8 U	50.0 U
bis(2-Chloroethyl) ether	UG/L	12.8 U	50.0 U
bis(2-Ethylhexyl)phthalate	UG/L	12.8 U	50.0 U
Butyl benzyl phthalate	UG/L	12.8 U	50.0 U
Carbazole	UG/L	12.8 U	50.0 U
Chrysene	UG/L	12.8 U	50.0 U
Dibenzofuran	UG/L	12.8 U	50.0 U
Dibenz[a,h]anthracene	UG/L	12.8 U	50.0 U
Diethylphthalate	UG/L	12.8 U	50.0 U
Dimethyl phthalate	UG/L	12.8 U	50.0 U
di-n-Butylphthalate	UG/L	13.00 U	50.0 U
di-n-Octylphthalate	UG/L	12.8 U	50.0 U
Fluoranthene	UG/L	12.8 U	50.0 U
Fluorene	UG/L	12.8 U	50.0 U
Hexachlorobenzene	UG/L	12.8 U	50.0 U
Hexachlorobutadiene	UG/L	12.8 U	50.0 U
Hexachlorocyclopentadiene	UG/L	12.8 U	50.0 U
Hexachloroethane	UG/L	12.8 U	50.0 U
Indeno[1,2,3-cd]pyrene	UG/L	12.8 U	50.0 U
Isophorone	UG/L	12.8 U	50.0 U
Naphthalene	UG/L	12.8 U	50.0 U
Nitrobenzene	UG/L	12.8 U	50.0 U
N-Nitroso-di-n-propylamine	UG/L	12.8 U	50.0 U
N-nitrosodiphenylamine	UG/L	12.8 U	50.0 U
Pentachlorophenol	UG/L	32.0 U	125.0 U
Phenanthrene	UG/L	12.8 U	50.0 U
Phenol	UG/L	12.8 U	50.0 U
Pyrene	UG/L	12.8 U	50.0 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

VOLATILES

Chloromethane	UG/L	10.0 U	10.0 U
Bromomethane	UG/L	10.0 U	10.0 U
Vinyl chloride	UG/L	10.0 U	10.0 U
Chloroethane	UG/L	10.0 U	10.0 U
Methylene chloride	UG/L	10.00 U	10.00 U
Acetone	UG/L	13.0 UJ	470 R
Carbon Disulfide	UG/L	10.0 U	10.0 U
1,1-Dichloroethene	UG/L	10.0 U	10.0 U
1,1-Dichloroethane	UG/L	10.0 U	10.0 U
1,2-Dichloroethene(total)	UG/L	10.0 U	2.00 J
Chloroform	UG/L	10.0 U	10.0 U
1,2-Dichloroethane	UG/L	10.0 U	10.0 U
2-Butanone	UG/L	10.0 U	10.0 U
1,1,1-Trichloroethane	UG/L	10.0 U	10.0 U
Carbon tetrachloride	UG/L	10.0 U	10.0 U
Bromodichloromethane	UG/L	10.0 U	10.0 U
1,2-Dichloropropane	UG/L	10.0 U	10.0 U
cis-1,3-Dichloropropene	UG/L	10.0 U	10.0 U
Trichloroethene	UG/L	10.0 U	10.0 U
Dibromochloromethane	UG/L	10.0 U	10.0 U
1,1,2-Trichloroethane	UG/L	10.0 U	10.0 U
Benzene	UG/L	10.0 U	10.0 U
trans-1,3-Dichloropropene	UG/L	10.0 U	10.0 U
Bromoform	UG/L	10.0 U	10.0 U
4-Methyl-2-pentanone	UG/L	10.0 U	10.0 U
2-Hexanone	UG/L	10.0 U	10.0 U
Tetrachloroethene	UG/L	10.0 U	10.0 U
1,1,2,2-Tetrachloroethane	UG/L	10.0 U	1.00 J
Toluene	UG/L	10.0 U	10.0 U
Chlorobenzene	UG/L	10.0 U	10.0 U
Ethylbenzene	UG/L	10.0 U	10.0 U
Styrene	UG/L	10.0 U	10.0 U
Xylenes (total)	UG/L	10.0 U	10.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

	<u>UNITS</u>		
<u>PESTICIDE/PCBS</u>			
alpha-BHC	UG/L	0.060 UJ	0.250 UJ
beta-BHC	UG/L	0.060 UJ	0.250 UJ
delta-BHC	UG/L	0.060 UJ	0.250 UJ
Lindane (gamma-BHC)	UG/L	0.060 UJ	0.250 UJ
Heptachlor	UG/L	0.060 UJ	0.250 UJ
Aldrin	UG/L	0.060 UJ	0.250 UJ
Heptachlor epoxide	UG/L	0.060 UJ	0.250 UJ
Endosulfan I	UG/L	0.060 UJ	0.250 UJ
Dieldrin	UG/L	0.120 UJ	0.500 UJ
4,4'-DDE	UG/L	0.120 UJ	0.500 UJ
Endrin	UG/L	0.120 UJ	0.500 UJ
Endosulfan II	UG/L	0.120 UJ	0.500 UJ
4,4'-DDD	UG/L	0.120 UJ	0.500 UJ
Endosulfan sulfate	UG/L	0.120 UJ	0.500 UJ
4,4'-DDT	UG/L	0.120 UJ	0.500 UJ
Methoxychlor	UG/L	0.600 UJ	2.50 UJ
Endrin ketone	UG/L	0.120 UJ	0.500 UJ
Endrin aldehyde	UG/L	0.120 UJ	0.500 UJ
alpha-Chlordane	UG/L	0.060 UJ	0.250 UJ
gamma-Chlordane	UG/L	0.060 UJ	0.250 UJ
Toxaphene	UG/L	6.00 UJ	25.0 UJ
Aroclor 1016	UG/L	1.20 UJ	5.00 UJ
Aroclor 1221	UG/L	2.40 UJ	10.0 UJ
Aroclor 1232	UG/L	1.20 UJ	5.00 UJ
Aroclor 1242	UG/L	1.20 UJ	5.00 UJ
Aroclor 1248	UG/L	1.20 UJ	5.00 UJ
Aroclor 1254	UG/L	1.20 UJ	5.00 UJ
Aroclor 1260	UG/L	1.20 UJ	5.00 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

CHEMICAL SURETY

Acetophenone	UG/L	12.8 U	50.0 U
Chloroacetophenone	UG/L	12.8 U	50.0 U
Hydroxyacetophenone	UG/L	64.0 U	250.0 U
Bis(2'-chloroethyl)disulfide	UG/L	64.0 U	250.0 U
Bis(2'-chloroethyl)trisulfide	UG/L	64.0 U	250.0 U
1,4-Dithiane	UG/L	12.8 U	50.0 U
1,4-Oxathiane	UG/L	12.8 U	50.0 U

THIODIGLYCOL

Thiodiglycol	UG/L	25.0 U	25.0 U
--------------	------	--------	--------

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>SEMIVOLATILES</u>						
1,2-Dichlorobenzene	UG/L	11 U	50 U	ND	ND	0/12
1,2,4-Trichlorobenzene	UG/L	11 U	50 U	ND	ND	0/12
1,3-Dichlorobenzene	UG/L	11 U	50 U	ND	ND	0/12
1,4-Dichlorobenzene	UG/L	11 U	50 U	2 J	2 J	69-GW03-01 1/12
2-Chloronaphthalene	UG/L	11 U	50 U	ND	ND	0/12
2-Chlorophenol	UG/L	11 U	50 U	ND	ND	0/12
2-Methylnaphthalene	UG/L	11 U	50 U	ND	ND	0/12
2-Methylphenol	UG/L	11 U	50 U	ND	ND	0/12
2-Nitroaniline	UG/L	27.5 U	125 U	ND	ND	0/12
2-Nitrophenol	UG/L	11 U	50 U	ND	ND	0/12
2,2'-oxybis-(1-chloropropane)	UG/L	11 U	50 U	ND	ND	0/12
2,4-Dichlorophenol	UG/L	11 U	50 U	ND	ND	0/12
2,4-Dimethylphenol	UG/L	11 U	50 U	ND	ND	0/12
2,4-Dinitrophenol	UG/L	27.5 UJ	125 U	ND	ND	0/12
2,4-Dinitrotoluene	UG/L	11 U	50 U	ND	ND	0/12
2,4,5-Trichlorophenol	UG/L	27.5 U	125 U	ND	ND	0/12
2,4,6-Trichlorophenol	UG/L	11 U	50 U	ND	ND	0/12
2,6-Dinitrotoluene	UG/L	11 U	50 U	ND	ND	0/12
3-Nitroaniline	UG/L	27.5 U	125 U	ND	ND	0/12
3,3'-Dichlorobenzidine	UG/L	11 U	50 U	ND	ND	0/12
4-Bromophenyl-phenylether	UG/L	11 U	50 U	ND	ND	0/12
4-Chloro-3-methylphenol	UG/L	11 U	50 U	ND	ND	0/12
4-Chloroaniline	UG/L	11 U	50 U	ND	ND	0/12
4-Chlorophenyl phenyl ether	UG/L	11 U	50 U	ND	ND	0/12
4-Methylphenol	UG/L	11 U	50 U	ND	ND	0/12
4-Nitroaniline	UG/L	27.5 U	125 U	ND	ND	0/12
4-Nitrophenol	UG/L	27.5 U	125 U	ND	ND	0/12
4,6-Dinitro-2-methylphenol	UG/L	27.5 U	125 U	ND	ND	0/12
Acenaphthene	UG/L	11 U	50 U	ND	ND	0/12
Acenaphthylene	UG/L	11 U	50 U	ND	ND	0/12
Anthracene	UG/L	11 U	50 U	ND	ND	0/12
Benzo[a]anthracene	UG/L	11 U	50 U	ND	ND	0/12
Benzo[a]pyrene	UG/L	11 U	50 U	ND	ND	0/12

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/L	11 U	50 U	ND	ND	0/12
Benzo[g,h,i]perylene	UG/L	11 U	50 U	ND	ND	0/12
Benzo[k]fluoranthene	UG/L	11 U	50 U	ND	ND	0/12
bis(2-Chloroethoxy) methane	UG/L	11 U	50 U	ND	ND	0/12
bis(2-Chloroethyl) ether	UG/L	11 U	50 U	ND	ND	0/12
bis(2-Ethylhexyl)phthalate	UG/L	11 U	50 U	ND	ND	0/12
Butyl benzyl phthalate	UG/L	11 U	50 U	ND	ND	0/12
Carbazole	UG/L	11 U	50 U	ND	ND	0/12
Chrysene	UG/L	11 U	50 U	ND	ND	0/12
Dibenzofuran	UG/L	11 U	50 U	ND	ND	0/12
Dibenz[a,h]anthracene	UG/L	11 U	50 U	ND	ND	0/12
Diethylphthalate	UG/L	11 U	50 U	ND	ND	0/12
Dimethyl phthalate	UG/L	11 U	50 U	ND	ND	0/12
di-n-Butylphthalate	UG/L	11 U	50 U	ND	ND	0/12
di-n-Octylphthalate	UG/L	11 U	50 U	ND	ND	0/12
Fluoranthene	UG/L	11 U	50 U	ND	ND	0/12
Fluorene	UG/L	11 U	50 U	ND	ND	0/12
Hexachlorobenzene	UG/L	11 U	50 U	ND	ND	0/12
Hexachlorobutadiene	UG/L	11 U	50 U	ND	ND	0/12
Hexachlorocyclopentadiene	UG/L	11 U	50 U	ND	ND	0/12
Hexachloroethane	UG/L	11 U	50 U	ND	ND	0/12
Indeno[1,2,3-cd]pyrene	UG/L	11 U	50 U	ND	ND	0/12
Isophorone	UG/L	11 U	50 U	ND	ND	0/12
Naphthalene	UG/L	11 U	50 U	ND	ND	0/12
Nitrobenzene	UG/L	11 U	50 U	ND	ND	0/12
N-Nitroso-di-n-propylamine	UG/L	11 U	50 U	ND	ND	0/12
N-nitrosodiphenylamine	UG/L	11 U	50 U	ND	ND	0/12
Pentachlorophenol	UG/L	27.5 U	125 U	ND	ND	0/12
Phenanthrene	UG/L	11 U	50 U	ND	ND	0/12
Phenol	UG/L	11 U	50 U	ND	ND	0/12
Pyrene	UG/L	11 U	50 U	ND	ND	0/12

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/L	10 U	10 U	ND	ND	0/12
Bromomethane	UG/L	10 U	10 U	ND	ND	0/12
Vinyl chloride	UG/L	10 U	10 U	31 J	31 J	69-GW02-01 1/12
Chloroethane	UG/L	10 U	10 U	ND	ND	0/12
Methylene chloride	UG/L	10 U	10 U	ND	ND	0/12
Acetone	UG/L	10 UJ	120 UJ	ND	ND	0/11
Carbon Disulfide	UG/L	10 U	10 U	1 J	1 J	69-GW10-01 1/12
1,1-Dichloroethene	UG/L	10 U	10 U	1 J	1 J	69-GW03-01 1/12
1,1-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/12
1,2-Dichloroethene(total)	UG/L	10 U	10 U	2 J	2400	69-GW02-01 4/12
Chloroform	UG/L	10 U	10 U	ND	ND	0/12
1,2-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/12
2-Butanone	UG/L	10 U	10 U	ND	ND	0/12
1,1,1-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/12
Carbon tetrachloride	UG/L	10 U	10 U	ND	ND	0/12
Bromodichloromethane	UG/L	10 U	10 U	ND	ND	0/12
1,2-Dichloropropane	UG/L	10 U	10 U	ND	ND	0/12
cis-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/12
Trichloroethene	UG/L	10 U	10 U	1 J	23 J	69-GW02-01 2/12
Dibromochloromethane	UG/L	10 U	10 U	ND	ND	0/12
1,1,2-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/12
Benzene	UG/L	10 U	10 U	1 J	1 J	69-GW03-01 1/12
trans-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/12
Bromoform	UG/L	10 U	10 U	ND	ND	0/12
4-Methyl-2-pentanone	UG/L	10 U	10 U	ND	ND	0/12
2-Hexanone	UG/L	10 U	10 U	ND	ND	0/12
Tetrachloroethene	UG/L	10 U	10 U	1 J	1 J	69-GW02-01 1/12
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U	1 J	22 J	69-GW02-01 3/12
Toluene	UG/L	10 U	10 U	1 J	4 J	69-GW03-01 2/12
Chlorobenzene	UG/L	10 U	10 U	25 J	25 J	69-GW03-01 1/12
Ethylbenzene	UG/L	10 U	10 U	ND	ND	0/12
Styrene	UG/L	10 U	10 U	ND	ND	0/12
Xylenes (total)	UG/L	10 U	10 U	ND	ND	0/12

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>					
	<u>PESTICIDE/PCBS</u>					
alpha-BHC	UG/L	0.05 U	0.25 UJ	0.056	0.056	69-GW03-02 1/12
beta-BHC	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
delta-BHC	UG/L	0.05 U	0.25 UJ	2.3	2.3	69-GW03-02 1/12
Lindane (gamma-BHC)	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Heptachlor	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Aldrin	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Heptachlor epoxide	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Endosulfan I	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Dieldrin	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
4,4'-DDE	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
Endrin	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
Endosulfan II	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
4,4'-DDD	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
Endosulfan sulfate	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
4,4'-DDT	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
Methoxychlor	UG/L	0.5 U	2.5 UJ	ND	ND	0/12
Endrin ketone	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
Endrin aldehyde	UG/L	0.1 U	0.5 UJ	ND	ND	0/12
alpha-Chlordane	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
gamma-Chlordane	UG/L	0.05 U	0.25 UJ	ND	ND	0/12
Toxaphene	UG/L	5 U	25 UJ	ND	ND	0/12
Aroclor 1016	UG/L	1 U	5 UJ	ND	ND	0/12
Aroclor 1221	UG/L	2 U	10 UJ	ND	ND	0/12
Aroclor 1232	UG/L	1 U	5 UJ	ND	ND	0/12
Aroclor 1242	UG/L	1 U	5 UJ	ND	ND	0/12
Aroclor 1248	UG/L	1 U	5 UJ	ND	ND	0/12
Aroclor 1254	UG/L	1 U	5 UJ	ND	ND	0/12
Aroclor 1260	UG/L	1 U	5 UJ	ND	ND	0/12

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>					
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/L	11 U	50 U	ND	ND	0/12
Chloroacetophenone	UG/L	11 U	50 U	ND	ND	0/12
Hydroxyacetophenone	UG/L	55 U	250 U	ND	ND	0/12
Bis(2'-chloroethyl)disulfide	UG/L	55 U	250 U	ND	ND	0/12
Bis(2'-chloroethyl)trisulfide	UG/L	55 U	250 U	ND	ND	0/12
1,4-Dithiane	UG/L	11 U	50 U	ND	ND	0/12
1,4-Oxathiane	UG/L	11 U	50 U	ND	ND	0/12
<u>THIODIGLYCOL</u>						
Thiodiglycol	UG/L	25 U	25 U	ND	ND	0/12



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW1	69GW02	69GW3	69GW4	69GW5	69GW6
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA
Date Sampled:	02/26/95	02/24/95	02/25/95	02/25/95	02/25/95	02/26/95
<u>UNITS</u>						
<u>PURGEABLE HALOCARBONS 601</u>						
Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U	5 U
Bromomethane	UG/L	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U
Chloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
2-Chlorovinyl ether	UG/L	5 U	5 U	5 U	5 U	5 U
Chloroform	UG/L	5 U	5 U	5 U	6	5 U
Chloromethane	UG/L	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	UG/L	5 U	230	5 U	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U	5 U	5 U	5 U
1,1,2,2,-Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U	5 U	5 U	5 U
Trichloroethene	UG/L	5 U	10	8	5 U	5 U
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	UG/L	5 U	5	5 U	5 U	5 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW7	69GW8	69GW09	69GW10	69GW11	69GW12
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA
Date Sampled:	02/26/95	02/26/95	02/21/95	02/23/95	02/22/95	02/22/95

UNITS

PURGEABLE HALOCARBONS 601

Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorovinyl ether	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2,-Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW13	69GW14
Laboratory Sample ID:	NA	NA
Date Sampled:	02/21/95	02/24/95

UNITS

PURGEABLE HALOCARBONS 601

Bromodichloromethane	UG/L	5 U	5 U
Bromoform	UG/L	5 U	5 U
Bromomethane	UG/L	5 U	5 U
Carbon Tetrachloride	UG/L	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U
Chloroethane	UG/L	5 U	5 U
2-Chlorovinyl ether	UG/L	5 U	5 U
Chloroform	UG/L	5 U	5 U
Chloromethane	UG/L	5 U	5 U
Dibromochloromethane	UG/L	5 U	5 U
1,2-Dichlorobenzene	UG/L	5 U	5 U
1,3-Dichlorobenzene	UG/L	5 U	5 U
1,4-Dichlorobenzene	UG/L	5 U	5 U
Dichlorodifluoromethane	UG/L	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U
trans-1,2-Dichloroethene	UG/L	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U
cis-1,3-Dichloropropene	UG/L	5 U	5 U
trans-1,3-Dichloropropene	UG/L	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U
Trichloroethene	UG/L	5 U	5 U
1,1,1-Trichloroethane	UG/L	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U
Trichlorofluoromethane	UG/L	5 U	5 U
Vinyl Chloride	UG/L	5 U	5 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>PURGEABLE HALOCARBONS 601</u>						
Bromodichloromethane	UG/L	5 U	5 U	ND	ND	0/14
Bromoform	UG/L	5 U	5 U	ND	ND	0/14
Bromomethane	UG/L	5 U	5 U	ND	ND	0/14
Carbon Tetrachloride	UG/L	5 U	5 U	ND	ND	0/14
Chlorobenzene	UG/L	5 U	5 U	ND	ND	0/14
Chloroethane	UG/L	5 U	5 U	ND	ND	0/14
2-Chlorovinyl ether	UG/L	5 U	5 U	ND	ND	0/14
Chloroform	UG/L	5 U	5 U	6	6	69GW4 1/14
Chloromethane	UG/L	5 U	5 U	ND	ND	0/14
Dibromochloromethane	UG/L	5 U	5 U	ND	ND	0/14
1,2-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/14
1,3-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/14
1,4-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/14
Dichlorodifluoromethane	UG/L	5 U	5 U	ND	ND	0/14
1,1-Dichloroethane	UG/L	5 U	5 U	ND	ND	0/14
1,2-Dichloroethane	UG/L	5 U	5 U	ND	ND	0/14
1,1-Dichloroethene	UG/L	5 U	5 U	ND	ND	0/14
trans-1,2-Dichloroethene	UG/L	5 U	5 U	230	230	69GW02 1/14
1,2-Dichloropropane	UG/L	5 U	5 U	ND	ND	0/14
cis-1,3-Dichloropropene	UG/L	5 U	5 U	ND	ND	0/14
trans-1,3-Dichloropropene	UG/L	5 U	5 U	ND	ND	0/14
Methylene Chloride	UG/L	5 U	5 U	ND	ND	0/14
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U	ND	ND	0/14
Tetrachloroethene	UG/L	5 U	5 U	ND	ND	0/14
Trichloroethene	UG/L	5 U	5 U	8	10	69GW02 2/14
1,1,1-Trichloroethane	UG/L	5 U	5 U	ND	ND	0/14
1,1,2-Trichloroethane	UG/L	5 U	5 U	ND	ND	0/14
Trichlorofluoromethane	UG/L	5 U	5 U	ND	ND	0/14
Vinyl Chloride	UG/L	5 U	5 U	5	5	69GW02 1/14

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-04	69-GW03-04	69-GW13-04	69-GW14-03	69-MW15-01
Laboratory Sample ID:	C5C280034004	C5C280034002	C5C280034008	C5C280034011	C5C300074001
Date Sampled:	03/25/95	03/25/95	03/26/95	03/26/95	03/29/95

UNITS

VOLATILES

	69-GW02-04	69-GW03-04	69-GW13-04	69-GW14-03	69-MW15-01	
Chloromethane	UG/L	10 U	20 U	10 U	200 U	
Bromomethane	UG/L	10 U	20 U	10 U	200 U	
Vinyl Chloride	UG/L	10 U	20 U	10 U	55 J	
Chloroethane	UG/L	10 U	20 U	10 U	200 U	
Methylene chloride	UG/L	10 U	20 U	10 U	200 U	
Acetone	UG/L	10 U	20 U	10 U	200 U	
Carbon disulfide	UG/L	10 U	20 U	10 U	200 U	
1,1-Dichloroethene	UG/L	10 U	20 U	10 U	200 U	
1,1-Dichloroethane	UG/L	10 U	20 U	10 U	200 U	
1,2-Dichloroethene (total)	UG/L	11	250	10 U	6 J	190 J
Chloroform	UG/L	10 U	20 U	10 U	10 U	200 U
1,2-Dichloroethane	UG/L	10 U	20 U	10 U	10 U	200 U
Methyl ethyl ketone	UG/L	10 U	20 U	10 U	10 U	200 U
1,1,1-Trichloroethane	UG/L	10 U	20 U	10 U	10 U	200 U
Carbon tetrachloride	UG/L	10 U	20 U	10 U	10 U	200 U
Bromodichloromethane	UG/L	10 U	20 U	10 U	10 U	200 U
1,2-Dichloropropane	UG/L	10 U	20 U	10 U	10 U	200 U
cis-1,3-Dichloropropene	UG/L	10 U	20 U	10 U	10 U	200 U
Trichloroethene	UG/L	10 U	7 J	10 U	1 J	150 J
Dibromochloromethane	UG/L	10 U	20 U	10 U	10 U	200 U
1,1,2-Trichloroethane	UG/L	10 U	20 U	10 U	10 U	200 U
Benzene	UG/L	10 U	20 U	10 U	10 U	200 U
trans-1,3-Dichloropropene	UG/L	10 U	20 U	10 U	10 U	200 U
Bromoform	UG/L	10 U	20 U	10 U	10 U	200 U
4-Methyl-2-Pentanone	UG/L	10 R	20 R	10 R	10 R	200 R
2-Hexanone	UG/L	10 U	20 U	10 U	10 U	200 U
Tetrachloroethene	UG/L	10 U	20 U	10 U	10 U	33 J
1,1,2,2-Tetrachloroethane	UG/L	10 U	20 U	10 U	10 U	3000
Toluene	UG/L	10 U	20 U	10 U	10 U	200 U
Chlorobenzene	UG/L	10 U	4 J	10 U	10 U	85 J
Ethylbenzene	UG/L	10 U	20 U	10 U	10 U	200 U
Styrene	UG/L	10 U	20 U	10 U	10 U	200 U
Xylene (total)	UG/L	10 U	20 U	10 U	10 U	200 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/L	10 U	200 U	ND	ND	0/5
Bromomethane	UG/L	10 U	200 U	ND	ND	0/5
Vinyl Chloride	UG/L	10 U	20 U	55 J	55 J	69-GW15-01 1/5
Chloroethane	UG/L	10 U	200 U	ND	ND	0/5
Methylene chloride	UG/L	10 U	200 U	ND	ND	0/5
Acetone	UG/L	10 U	200 U	ND	ND	0/5
Carbon disulfide	UG/L	10 U	200 U	ND	ND	0/5
1,1-Dichloroethene	UG/L	10 U	200 U	ND	ND	0/5
1,1-Dichloroethane	UG/L	10 U	200 U	ND	ND	0/5
1,2-Dichloroethene (total)	UG/L	10 U	10 U	6 J	250	69-GW03-04 5/5
Chloroform	UG/L	10 U	200 U	ND	ND	0/5
1,2-Dichloroethane	UG/L	10 U	200 U	ND	ND	0/5
Methyl ethyl ketone	UG/L	10 U	200 U	ND	ND	0/5
1,1,1-Trichloroethane	UG/L	10 U	200 U	ND	ND	0/5
Carbon tetrachloride	UG/L	10 U	200 U	ND	ND	0/5
Bromodichloromethane	UG/L	10 U	200 U	ND	ND	0/5
1,2-Dichloropropane	UG/L	10 U	200 U	ND	ND	0/5
cis-1,3-Dichloropropene	UG/L	10 U	200 U	ND	ND	0/5
Trichloroethene	UG/L	10 U	10 U	1 J	150 J	69-GW15-01 3/5
Dibromochloromethane	UG/L	10 U	200 U	ND	ND	0/5
1,1,2-Trichloroethane	UG/L	10 U	200 U	ND	ND	0/5
Benzene	UG/L	10 U	200 U	ND	ND	0/5
trans-1,3-Dichloropropene	UG/L	10 U	200 U	ND	ND	0/5
Bromoform	UG/L	10 U	200 U	ND	ND	0/5
4-Methyl-2-Pentanone	UG/L	NA	NA	ND	ND	0/0
2-Hexanone	UG/L	10 U	200 U	ND	ND	0/5
Tetrachloroethene	UG/L	10 U	20 U	33 J	33 J	69-MW15-01 1/5
1,1,2,2-Tetrachloroethane	UG/L	10 U	20 U	3000	3000	69-MW15-01 1/5
Toluene	UG/L	10 U	200 U	ND	ND	0/5
Chlorobenzene	UG/L	10 U	10 U	4 J	85 J	69-MW15-01 2/5
Ethylbenzene	UG/L	10 U	200 U	ND	ND	0/5
Styrene	UG/L	10 U	200 U	ND	ND	0/5
Xylene (total)	UG/L	10 U	200 U	ND	ND	0/5

**APPENDIX O.6**  
**SITE 69 SHALLOW GROUNDWATER TOTAL METALS**

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

	69-GW01-02	69-GW02-01	69-GW03-02	69-GW04-01	69-GW05-01	69-GW06-01
Client Sample ID:	AB8051	9401128-01A	AB7977	9401128-03A	9401118-03A	9401118-02A
Laboratory Sample ID:	08/26/94	01/22/94	08/25/94	01/22/94	01/21/94	01/21/94
Date Sampled:						
	<u>UNITS</u>					
Aluminum	UG/L 3640	17500.0 J	304	45000.0 J	8100.0	10500.0
Antimony	UG/L 50 U	7.90 UJ	50 U	7.90 UJ	7.9 R	8.59 J
Arsenic	UG/L 2 U	2.90 UJ	2 U	2.90 UJ	5.00	10.8
Barium	UG/L 60	50.1	29.6	73.9	89.6	68.7
Beryllium	UG/L 1 U	1.29 U	1 U	1.29 U	1.29 U	2.12
Cadmium	UG/L 5 U	2.35 U	5 U	2.35 U	3.12	2.35 U
Calcium	UG/L 5360	8690.0 J	5320	2430.0 J	4140.0	3380.0
Chromium	UG/L 10 U	35.0	10 U	51.5	15.1	29.0
Cobalt	UG/L 10 U	19.4 U	10 U	19.4 U	19.4 U	19.4 U
Copper	UG/L 10 U	16.2 U	10 U	16.2 U	16.2 U	16.2 U
Iron	UG/L 1610	71900.0 J	10100	99500.0 J	40600.0	34200.0
Lead	UG/L 4.4	12.3	2 U	20.2	9.35 J	40.5
Magnesium	UG/L 2570	1930.0	371	1460.0	2600.0	2930.0
Manganese	UG/L 41.3	102.0	92.6	151.0	148.0	66.3
Mercury	UG/L 0.2 U	0.100 U	0.2 U	0.173	0.068	0.128
Nickel	UG/L 20 U	13.6 U	20 U	13.6 U	13.6 U	13.6 U
Potassium	UG/L 1000 U	1510.00 J	1000 U	1700.00 J	1860.0	1640.0
Selenium	UG/L 2 U	2.53 UJ	2 U	2.53 UJ	2.53 U	2.53 UJ
Silver	UG/L 5 U	0.400 UJ	5 U	0.400 UJ	0.400 U	0.400 U
Sodium	UG/L 13000	14100.0	6510	9750.00	7140.0	8270.0
Thallium	UG/L 2 U	4.60 UJ	2 U	4.60 U	4.60 UJ	4.60 U
Vanadium	UG/L 10 U	175.0	10 U	79.5	32.5	34.0
Zinc	UG/L 234	71.3 J	1990	9120.0 J	46.4 U	56.3
Total Cyanide	UG/L 5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401130-05A	9401118-01A	9401117-03A	9401117-04A	9401117-02A	9401117-01A
Date Sampled:	01/22/94	01/21/94	01/20/94	01/20/94	01/20/94	01/20/94

	<u>UNITS</u>						
Aluminum	UG/L	7380.0 J	48000.0	18400.0	21500.0	11800.0	211000.0
Antimony	UG/L	7.90 UJ	7.9 R	7.9 R	7.9 R	7.9 R	7.9 R
Arsenic	UG/L	2.90 UJ	7.06	3.20	19.9	2.94 J	29.0 UJ
Barium	UG/L	46.5	601.0	182.0	134.0	58.0	850.0
Beryllium	UG/L	1.29 U	4.30	2.42	2.10	1.29 U	10.6
Cadmium	UG/L	2.35 U	3.89	2.35 U	2.35 U	2.35 U	11.4
Calcium	UG/L	4310.0 J	38700.0	8720.0	5970.0	2010.0	23400.0
Chromium	UG/L	15.8	76.2	29.4	44.2	17.8	159.0
Cobalt	UG/L	19.4 U	19.4 U	19.4 U	19.4 U	19.4 U	25.9
Copper	UG/L	16.2 U	21.1	16.2 U	16.5	16.2 U	70.8
Iron	UG/L	19200.0 J	56400.0	48300.0	31600.0	6360.0	51700.0
Lead	UG/L	7.80	77.3	9.79 J	37.8	8.90 J	188.0
Magnesium	UG/L	2140.0	8080.0	3640.0	3060.0	2190.0	13200.0
Manganese	UG/L	13.0	912.0	204.0	265.0	43.1	476.0
Mercury	UG/L	0.100 U	0.419	0.063 U	0.215	0.063 U	0.936
Nickel	UG/L	13.6 U	24.2	16.7	26.2	13.6 U	99.8
Potassium	UG/L	1410.00 J	4000.0	2320.0	2880.0	1640.0	7610.0
Selenium	UG/L	2.53 UJ	2.53 UJ	3.81 J	2.53 UJ	5.13 J	5.28 J
Silver	UG/L	0.400 UJ	0.400 U	0.400 U	2.31 U	0.400 U	0.400 U
Sodium	UG/L	5570.00	4790.0	9210.0	4890.0	7240.0	4130.0
Thallium	UG/L	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U
Vanadium	UG/L	17.2	103.0	39.6	60.8	24.9	210.0
Zinc	UG/L	36.2 UJ	136.0	84.6	133.0	52.1	689.0
Total Cyanide	UG/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>					
Aluminum	UG/L	NA	NA	304	211000	69-GW12-01 12/12
Antimony	UG/L	7.9 UJ	50 U	8.59 J	8.59 J	69-GW06-01 1/6
Arsenic	UG/L	2 U	29 UJ	2.94 J	19.9	69-GW10-01 6/12
Barium	UG/L	NA	NA	29.6	850	69-GW12-01 12/12
Beryllium	UG/L	1 U	1.29 U	2.1	10.6	69-GW12-01 5/12
Cadmium	UG/L	2.35 U	5 U	3.12	11.4	69-GW12-01 3/12
Calcium	UG/L	NA	NA	2010	38700	69-GW08-01 12/12
Chromium	UG/L	10 U	10 U	15.1	159	69-GW12-01 10/12
Cobalt	UG/L	2 U	19.4 U	25.9	25.9	69-GW12-01 1/12
Copper	UG/L	10 U	16.2 U	16.5	70.8	69-GW12-01 3/12
Iron	UG/L	NA	NA	1610	99500 J	69-GW04-01 12/12
Lead	UG/L	2 U	2 U	4.4	188	69-GW12-01 11/12
Magnesium	UG/L	NA	NA	371	13200	69-GW12-01 12/12
Manganese	UG/L	NA	NA	13	912	69-GW08-01 12/12
Mercury	UG/L	0.063 U	0.2 U	0.068	0.936	69-GW12-01 6/12
Nickel	UG/L	13.6 U	20 U	16.7	99.8	69-GW12-01 4/12
Potassium	UG/L	1000 U	1000 U	1410 J	7610	69-GW12-01 10/12
Selenium	UG/L	2 U	2.53 UJ	3.81 J	5.28 J	69-GW12-01 3/12
Silver	UG/L	0.4 UJ	5 U	ND	ND	0/12
Sodium	UG/L	NA	NA	4130	14100	69-GW02-01 12/12
Thallium	UG/L	2 U	4.6 UJ	ND	ND	0/12
Vanadium	UG/L	10 U	10 U	17.2	210	69-GW12-01 10/12
Zinc	UG/L	36.2 UJ	46.4 U	52.1	9120 J	69-GW04-01 10/12
Total Cyanide	UG/L	5 U	5 U	ND	ND	0/12

**APPENDIX O.7**  
**SITE 69 SHALLOW GROUNDWATER DISSOLVED METALS**

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW01D-02	69-GW02-01	69-GW03D-02	69-GW04-01	69-GW05-01	69-GW06-01
Laboratory Sample ID:	AB8059	9401129-01A	AB7988	9401129-03A	9401120-03A	9401120-02A
Date Sampled:	08/26/94	01/22/94	08/25/94	01/22/94	01/21/94	01/21/94

	<u>UNITS</u>						
Aluminum	UG/L	564	1070.0 J	180	970.0 J	119.0 U	181.0
Antimony	UG/L	50 U	9.40 J	50 U	7.90 U	8.59 J	7.9 R
Arsenic	UG/L	2 U	2.90 UJ	2 U	2.90 UJ	2.90 U	2.90 U
Barium	UG/L	63.8	22.5	34	28.3	33.9	14.4
Beryllium	UG/L	1 U	1.29 U	1 U	1.29 U	1.29 U	1.29 U
Cadmium	UG/L	5 U	2.35 U	5 U	2.35 U	2.35 U	2.35 U
Calcium	UG/L	6600	9570.0 J	7190	2610.0 J	3680.0	2360.0
Chromium	UG/L	10 U	7.35 U	10 U	7.35 U	7.35 U	7.35 U
Cobalt	UG/L	10 U	19.4 U	10 U	19.4 U	19.4 U	19.4 U
Copper	UG/L	19.1	16.2 U	16.3	16.2 U	16.2 U	16.2 U
Iron	UG/L	146	2920.0 J	13400	80.2 J	52.5 U	708.0
Lead	UG/L	2 U	1.00 U	2 U	1.00 U	1.00 UJ	1.00 UJ
Magnesium	UG/L	3050	1180.0	511	826.0	1350.0	1750.0
Manganese	UG/L	49.3	83.6	124	139.0	52.3	31.6
Mercury	UG/L	0.25	0.100 U	0.2 U	0.100 U	0.063 U	0.063 U
Nickel	UG/L	20 U	13.6 U	20 U	13.6 U	13.6 U	13.6 U
Potassium	UG/L	1480	397.000 J	1000 U	397.000 J	500.0 U	852.0
Selenium	UG/L	2 U	2.53 UJ	2 U	2.53 UJ	2.53 UJ	3.95 J
Silver	UG/L	5 U	0.400 UJ	5 U	0.400 UJ	0.400 U	0.400 U
Sodium	UG/L	16100	15000.0	8210	10800.0	8080.0	9310.0
Thallium	UG/L	2 U	4.60 U	2 U	4.60 U	4.60 U	4.60 U
Vanadium	UG/L	10 U	16.6 U	10 U	16.6 U	16.6 U	16.6 U
Zinc	UG/L	27	14.5 UJ	2490	7670.0 J	10.5 U	20.8 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401131-01A	9401120-01A	9401119-03A	9401119-04A	9401119-02A	9401119-01A
Date Sampled:	01/22/94	01/21/94	01/20/94	01/20/94	01/20/94	01/20/94

	UNITS	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Aluminum	UG/L	119.0 UJ	119.0 U	119.0 U	119.0 U	352.0	1690.0
Antimony	UG/L	7.90 UJ	12.5 J	8.59 J	18.0 J	10.2 J	8.59 J
Arsenic	UG/L	2.90 UJ	2.90 U	2.90 U	2.90 U	2.90 U	2.90 U
Barium	UG/L	19.2	13.7 U	14.4	21.7	34.0	13.7 U
Beryllium	UG/L	1.29 U	1.29 U	1.29 U	1.29 U	1.29 U	1.29 U
Cadmium	UG/L	2.35 U	2.35 U	2.35 U	2.35 U	2.35 U	2.35 U
Calcium	UG/L	4220.0 J	5100.0	5670.0	3700.0	2120.0	764.0
Chromium	UG/L	7.35 U	7.35 U	7.35 U	7.35 U	7.35 U	7.35 U
Cobalt	UG/L	19.4 U	19.4 U	19.4 U	19.4 U	19.4 U	19.4 U
Copper	UG/L	16.2 U	16.2 U	16.2 U	16.2 U	16.2 U	16.2 U
Iron	UG/L	52.5 U	52.5 U	54.3	77.6	56.5	345.0
Lead	UG/L	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.08 J
Magnesium	UG/L	1940.0	634.0	1740.0	1180.0	1890.0	368.0
Manganese	UG/L	8.45	14.1	67.6	27.9	18.6	13.0
Mercury	UG/L	0.100 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U
Nickel	UG/L	13.6 U	13.6 U	13.6 U	13.6 U	13.6 U	13.6 U
Potassium	UG/L	1120.00 J	500.0 U	852.0	627.0	514.0	1300.0
Selenium	UG/L	2.53 UJ	3.22 J	2.77 J	3.95 J	5.58 J	2.53 UJ
Silver	UG/L	0.400 UJ	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Sodium	UG/L	6080.00	5170.0	1030.0	5640.0	7990.0	4110.0
Thallium	UG/L	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U
Vanadium	UG/L	16.6 U	16.6 U	16.6 U	16.6 U	16.6 U	16.6 U
Zinc	UG/L	7.02 UJ	7.02 U	7.41 U	8.10 U	15.9 U	13.4 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION	
	<u>UNITS</u>						
Aluminum	UG/L	119 U	119 U	180	1690	69-GW12-01	7/12
Antimony	UG/L	7.9 U	50 U	8.59 J	18 J	69-GW10-01	7/11
Arsenic	UG/L	2 U	2.9 UJ	ND	ND		0/12
Barium	UG/L	13.7 U	13.7 U	14.4	63.8	69-GW01D-02	10/12
Beryllium	UG/L	1 U	1.29 U	ND	ND		0/12
Cadmium	UG/L	2.35 U	5 U	ND	ND		0/12
Calcium	UG/L	NA	NA	764	9570 J	69-GW02-01	12/12
Chromium	UG/L	7.35 U	10 U	ND	ND		0/12
Cobalt	UG/L	10 U	19.4 U	ND	ND		0/12
Copper	UG/L	16.2 U	16.2 U	16.3	19.1	69-GW01D-02	2/12
Iron	UG/L	52.5 U	52.5 U	54.3	13400	69-GW03D-02	9/12
Lead	UG/L	1 U	2 U	1.08 J	1.08 J	69-GW12-01	1/12
Magnesium	UG/L	NA	NA	368	3050	69-GW01D-02	12/12
Manganese	UG/L	NA	NA	8.45	139	69-GW04-01	12/12
Mercury	UG/L	0.063 U	0.2 U	0.25	0.25	69-GW01D-02	1/12
Nickel	UG/L	13.6 U	20 U	ND	ND		0/12
Potassium	UG/L	500 U	1000 U	397 J	1480	69-GW01D-02	9/12
Selenium	UG/L	2 U	2.53 UJ	2.77 J	5.58 J	69-GW11-01	5/12
Silver	UG/L	0.4 UJ	5 U	ND	ND		0/12
Sodium	UG/L	NA	NA	1030	16100	69-GW01D-02	12/12
Thallium	UG/L	2 U	4.6 U	ND	ND		0/12
Vanadium	UG/L	10 U	16.6 U	ND	ND		0/12
Zinc	UG/L	7.02 UJ	20.8 U	27	7670 J	69-GW04-01	3/12

**APPENDIX O.8**  
**SITE 69 DEEP GROUNDWATER ORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-GW02-DW-01 69-GW12DW-01  
 Laboratory Sample ID: 9402153-01 9402150-01  
 Date Sampled:

	UNITS		
<b>SEMIVOLATILES</b>			
1,2-Dichlorobenzene	UG/L	13.3 U	20 U
1,2,4-Trichlorobenzene	UG/L	13.3 U	20 U
1,3-Dichlorobenzene	UG/L	13.3 U	20 U
1,4-Dichlorobenzene	UG/L	13.3 U	20 U
2-Chloronaphthalene	UG/L	13.3 U	20 U
2-Chlorophenol	UG/L	13.3 U	20 U
2-Methylnaphthalene	UG/L	13.3 U	20 U
2-Methylphenol	UG/L	13.3 U	20 U
2-Nitroaniline	UG/L	33.3 U	50 U
2-Nitrophenol	UG/L	13.3 U	20 U
2,2'-oxybis-(1-chloropropane)	UG/L	13.3 U	20 U
2,4-Dichlorophenol	UG/L	13.3 U	20 U
2,4-Dimethylphenol	UG/L	13.3 U	20 U
2,4-Dinitrophenol	UG/L	33.3 U	50 U
2,4-Dinitrotoluene	UG/L	13.3 U	20 U
2,4,5-Trichlorophenol	UG/L	33.3 U	50 U
2,4,6-Trichlorophenol	UG/L	13.3 U	20 U
2,6-Dinitrotoluene	UG/L	13.3 U	20 U
3-Nitroaniline	UG/L	33.3 UJ	50 UJ
3,3'-Dichlorobenzidine	UG/L	13.3 U	20 U
4-Bromophenyl-phenylether	UG/L	13.3 U	20 U
4-Chloro-3-methylphenol	UG/L	13.3 U	20 U
4-Chloroaniline	UG/L	13.3 U	20 U
4-Chlorophenyl phenyl ether	UG/L	13.3 U	20 U
4-Methylphenol	UG/L	13.3 U	20 U
4-Nitroaniline	UG/L	33.3 U	50 U
4-Nitrophenol	UG/L	33.3 U	50 U
4,6-Dinitro-2-methylphenol	UG/L	33.3 U	50 U
Acenaphthene	UG/L	13.3 U	20 U
Acenaphthylene	UG/L	13.3 U	20 U
Anthracene	UG/L	13.3 U	20 U
Benzo[a]anthracene	UG/L	13.3 U	20 U
Benzo[a]pyrene	UG/L	13.3 U	20 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	13.3 U	20 U
Benzo[g,h,i]perylene	UG/L	13.3 U	20 U
Benzo[k]fluoranthene	UG/L	13.3 U	20 U
bis(2-Chloroethoxy) methane	UG/L	13.3 U	20 U
bis(2-Chloroethyl) ether	UG/L	13.3 U	20 U
bis(2-Ethylhexyl)phthalate	UG/L	13.3 U	20 U
Butyl benzyl phthalate	UG/L	13.3 U	20 U
Carbazole	UG/L	13.3 U	20 U
Chrysene	UG/L	13.3 U	20 U
Dibenzofuran	UG/L	13.3 U	20 U
Dibenz[a,h]anthracene	UG/L	13.3 U	20 U
Diethylphthalate	UG/L	13.3 U	20 U
Dimethyl phthalate	UG/L	13.3 U	20 U
di-n-Butylphthalate	UG/L	13.3 U	20 U
di-n-Octylphthalate	UG/L	13.3 U	20 U
Fluoranthene	UG/L	13.3 U	20 U
Fluorene	UG/L	13.3 U	20 U
Hexachlorobenzene	UG/L	13.3 U	20 U
Hexachlorobutadiene	UG/L	13.3 U	20 U
Hexachlorocyclopentadiene	UG/L	13.3 U	20 U
Hexachloroethane	UG/L	13.3 U	20 U
Indeno[1,2,3-cd]pyrene	UG/L	13.3 U	20 U
Isophorone	UG/L	13.3 U	20 U
Naphthalene	UG/L	13.3 U	20 U
Nitrobenzene	UG/L	13.3 U	20 U
N-Nitroso-di-n-propylamine	UG/L	13.3 U	20 U
N-nitrosodiphenylamine	UG/L	13.3 U	20 U
Pentachlorophenol	UG/L	33.3 U	50 U
Phenanthrene	UG/L	13.3 U	20 U
Phenol	UG/L	13.3 U	20 U
Pyrene	UG/L	13.3 U	20 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-GW02-DW-01 69-GW12DW-01  
 Laboratory Sample ID: 9402153-01 9402150-01  
 Date Sampled:

	UNITS		
<u>VOLATILES</u>			
Chloromethane	UG/L	10 U	10 U
Bromomethane	UG/L	10 U	10 U
Vinyl chloride	UG/L	8.37 J	10 U
Chloroethane	UG/L	10 U	10 U
Methylene chloride	UG/L	10 U	10 U
Acetone	UG/L	180	10 U
Carbon Disulfide	UG/L	10 U	10 U
1,1-Dichloroethene	UG/L	10 U	10 U
1,1-Dichloroethane	UG/L	10 U	10 U
1,2-Dichloroethene(total)	UG/L	788	10 U
Chloroform	UG/L	10 U	10 U
1,2-Dichloroethane	UG/L	10 U	10 U
2-Butanone	UG/L	10 U	10 U
1,1,1-Trichloroethane	UG/L	10 U	10 U
Carbon tetrachloride	UG/L	10 U	10 U
Bromodichloromethane	UG/L	10 U	10 U
1,2-Dichloropropane	UG/L	10 U	10 U
cis-1,3-Dichloropropene	UG/L	10 U	10 U
Trichloroethene	UG/L	29.4	10 U
Dibromochloromethane	UG/L	10 U	10 U
1,1,2-Trichloroethane	UG/L	10 U	10 U
Benzene	UG/L	10 U	10 U
trans-1,3-Dichloropropene	UG/L	10 U	10 U
Bromoform	UG/L	10 U	10 U
4-Methyl-2-pentanone	UG/L	10 U	10 U
2-Hexanone	UG/L	10 U	10 U
Tetrachloroethene	UG/L	10 U	10 U
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U
Toluene	UG/L	10 U	10 U
Chlorobenzene	UG/L	10 U	10 U
Ethylbenzene	UG/L	10 U	10 U
Styrene	UG/L	10 U	10 U
Xylenes (total)	UG/L	10 U	10 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

<u>PESTICIDE/PCBS</u>	<u>UNITS</u>		
alpha-BHC	UG/L	0.061 UJ	0.06 UJ
beta-BHC	UG/L	0.061 UJ	0.06 UJ
delta-BHC	UG/L	0.061 UJ	0.06 UJ
Lindane (gamma-BHC)	UG/L	0.061 UJ	0.06 UJ
Heptachlor	UG/L	0.06 UJ	0.06 UJ
Aldrin	UG/L	0.061 UJ	0.06 UJ
Heptachlor epoxide	UG/L	0.061 UJ	0.06 UJ
Endosulfan I	UG/L	0.061 UJ	0.06 UJ
Dieldrin	UG/L	0.122 UJ	0.119 UJ
4,4'-DDE	UG/L	0.122 UJ	0.119 UJ
Endrin	UG/L	0.122 UJ	0.119 UJ
Endosulfan II	UG/L	0.122 UJ	0.119 UJ
4,4'-DDD	UG/L	0.122 UJ	0.119 UJ
Endosulfan sulfate	UG/L	0.122 UJ	0.119 UJ
4,4'-DDT	UG/L	0.122 UJ	0.119 UJ
Methoxychlor	UG/L	0.61 UJ	0.595 UJ
Endrin ketone	UG/L	0.122 UJ	0.119 UJ
Endrin aldehyde	UG/L	0.122 UJ	0.119 UJ
alpha-Chlordane	UG/L	0.061 UJ	0.06 UJ
gamma-Chlordane	UG/L	0.061 UJ	0.06 UJ
Toxaphene	UG/L	6.1 UJ	5.95 UJ
Aroclor 1016	UG/L	1.22 UJ	1.19 UJ
Aroclor 1221	UG/L	2.44 UJ	2.38 UJ
Aroclor 1232	UG/L	1.22 UJ	1.19 UJ
Aroclor 1242	UG/L	1.22 UJ	1.19 UJ
Aroclor 1248	UG/L	1.22 UJ	1.19 UJ
Aroclor 1254	UG/L	1.22 UJ	1.19 UJ
Aroclor 1260	UG/L	1.22 UJ	1.19 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

	<u>UNITS</u>		
<u>CHEMICAL SURETY</u>			
Acetophenone	UG/L	13.3 U	20 U
Chloroacetophenone	UG/L	13.3 U	20 U
Hydroxyacetophenone	UG/L	66.6 U	100 U
Bis(2'-chloroethyl)disulfide	UG/L	66.6 U	100 U
Bis(2'-chloroethyl)trisulfide	UG/L	66.6 U	100 U
1,4-Dithiane	UG/L	13.3 U	20 U
1,4-Oxathiane	UG/L	13.3 U	20 U
<u>THIODIGLYCOL</u>			
Thiodiglycol	UG/L	25 U	25 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>						
	<u>SEMIVOLATILES</u>						
	1,2-Dichlorobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
	1,2,4-Trichlorobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
	1,3-Dichlorobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
	1,4-Dichlorobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
	2-Chloronaphthalene	UG/L	13.3 U	20 U	ND	ND	0/2
	2-Chlorophenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2-Methylnaphthalene	UG/L	13.3 U	20 U	ND	ND	0/2
	2-Methylphenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2-Nitroaniline	UG/L	33.3 U	50 U	ND	ND	0/2
	2-Nitrophenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2,2'-oxybis-(1-chloropropane)	UG/L	13.3 U	20 U	ND	ND	0/2
	2,4-Dichlorophenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2,4-Dimethylphenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2,4-Dinitrophenol	UG/L	33.3 U	50 U	ND	ND	0/2
	2,4-Dinitrotoluene	UG/L	13.3 U	20 U	ND	ND	0/2
	2,4,5-Trichlorophenol	UG/L	33.3 U	50 U	ND	ND	0/2
	2,4,6-Trichlorophenol	UG/L	13.3 U	20 U	ND	ND	0/2
	2,6-Dinitrotoluene	UG/L	13.3 U	20 U	ND	ND	0/2
	3-Nitroaniline	UG/L	33.3 U	50 U	ND	ND	0/2
	3,3'-Dichlorobenzidine	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Bromophenyl-phenylether	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Chloro-3-methylphenol	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Chloroaniline	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Chlorophenyl phenyl ether	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Methylphenol	UG/L	13.3 U	20 U	ND	ND	0/2
	4-Nitroaniline	UG/L	33.3 U	50 U	ND	ND	0/2
	4-Nitrophenol	UG/L	33.3 U	50 U	ND	ND	0/2
	4,6-Dinitro-2-methylphenol	UG/L	33.3 U	50 U	ND	ND	0/2
	Acenaphthene	UG/L	13.3 U	20 U	ND	ND	0/2
	Acenaphthylene	UG/L	13.3 U	20 U	ND	ND	0/2
	Anthracene	UG/L	13.3 U	20 U	ND	ND	0/2
	Benzo[a]anthracene	UG/L	13.3 U	20 U	ND	ND	0/2
	Benzo[a]pyrene	UG/L	13.3 U	20 U	ND	ND	0/2

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/L	13.3 U	20 U	ND	ND	0/2
Benzo[g,h,i]perylene	UG/L	13.3 U	20 U	ND	ND	0/2
Benzo[k]fluoranthene	UG/L	13.3 U	20 U	ND	ND	0/2
bis(2-Chloroethoxy) methane	UG/L	13.3 U	20 U	ND	ND	0/2
bis(2-Chloroethyl) ether	UG/L	13.3 U	20 U	ND	ND	0/2
bis(2-Ethylhexyl)phthalate	UG/L	13.3 U	20 U	ND	ND	0/2
Butyl benzyl phthalate	UG/L	13.3 U	20 U	ND	ND	0/2
Carbazole	UG/L	13.3 U	20 U	ND	ND	0/2
Chrysene	UG/L	13.3 U	20 U	ND	ND	0/2
Dibenzofuran	UG/L	13.3 U	20 U	ND	ND	0/2
Dibenz[a,h]anthracene	UG/L	13.3 U	20 U	ND	ND	0/2
Diethylphthalate	UG/L	13.3 U	20 U	ND	ND	0/2
Dimethyl phthalate	UG/L	13.3 U	20 U	ND	ND	0/2
di-n-Butylphthalate	UG/L	13.3 U	20 U	ND	ND	0/2
di-n-Octylphthalate	UG/L	13.3 U	20 U	ND	ND	0/2
Fluoranthene	UG/L	13.3 U	20 U	ND	ND	0/2
Fluorene	UG/L	13.3 U	20 U	ND	ND	0/2
Hexachlorobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
Hexachlorobutadiene	UG/L	13.3 U	20 U	ND	ND	0/2
Hexachlorocyclopentadiene	UG/L	13.3 U	20 U	ND	ND	0/2
Hexachloroethane	UG/L	13.3 U	20 U	ND	ND	0/2
Indeno[1,2,3-cd]pyrene	UG/L	13.3 U	20 U	ND	ND	0/2
Isophorone	UG/L	13.3 U	20 U	ND	ND	0/2
Naphthalene	UG/L	13.3 U	20 U	ND	ND	0/2
Nitrobenzene	UG/L	13.3 U	20 U	ND	ND	0/2
N-Nitroso-di-n-propylamine	UG/L	13.3 U	20 U	ND	ND	0/2
N-nitrosodiphenylamine	UG/L	13.3 U	20 U	ND	ND	0/2
Pentachlorophenol	UG/L	33.3 U	50 U	ND	ND	0/2
Phenanthrene	UG/L	13.3 U	20 U	ND	ND	0/2
Phenol	UG/L	13.3 U	20 U	ND	ND	0/2
Pyrene	UG/L	13.3 U	20 U	ND	ND	0/2

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/L	10 U	10 U	ND	ND	0/2
Bromomethane	UG/L	10 U	10 U	ND	ND	0/2
Vinyl chloride	UG/L	10 U	10 U	8.37 J	8.37 J	69-GW02-DW-01 1/2
Chloroethane	UG/L	10 U	10 U	ND	ND	0/2
Methylene chloride	UG/L	10 U	10 U	ND	ND	0/2
Acetone	UG/L	10 U	10 U	180	180	69-GW02-DW-01 1/2
Carbon Disulfide	UG/L	10 U	10 U	ND	ND	0/2
1,1-Dichloroethene	UG/L	10 U	10 U	ND	ND	0/2
1,1-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/2
1,2-Dichloroethene(total)	UG/L	10 U	10 U	788	788	69-GW02-DW-01 1/2
Chloroform	UG/L	10 U	10 U	ND	ND	0/2
1,2-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/2
2-Butanone	UG/L	10 U	10 U	ND	ND	0/2
1,1,1-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/2
Carbon tetrachloride	UG/L	10 U	10 U	ND	ND	0/2
Bromodichloromethane	UG/L	10 U	10 U	ND	ND	0/2
1,2-Dichloropropane	UG/L	10 U	10 U	ND	ND	0/2
cis-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/2
Trichloroethene	UG/L	10 U	10 U	29.4	29.4	69-GW02-DW-01 1/2
Dibromochloromethane	UG/L	10 U	10 U	ND	ND	0/2
1,1,2-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/2
Benzene	UG/L	10 U	10 U	ND	ND	0/2
trans-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/2
Bromoform	UG/L	10 U	10 U	ND	ND	0/2
4-Methyl-2-pentanone	UG/L	10 U	10 U	ND	ND	0/2
2-Hexanone	UG/L	10 U	10 U	ND	ND	0/2
Tetrachloroethene	UG/L	10 U	10 U	ND	ND	0/2
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U	ND	ND	0/2
Toluene	UG/L	10 U	10 U	ND	ND	0/2
Chlorobenzene	UG/L	10 U	10 U	ND	ND	0/2
Ethylbenzene	UG/L	10 U	10 U	ND	ND	0/2
Styrene	UG/L	10 U	10 U	ND	ND	0/2
Xylenes (total)	UG/L	10 U	10 U	ND	ND	0/2

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
beta-BHC	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
delta-BHC	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Lindane (gamma-BHC)	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Heptachlor	UG/L	0.06 UJ	0.06 UJ	ND	ND	0/2
Aldrin	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Heptachlor epoxide	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Endosulfan I	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Dieldrin	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
4,4'-DDE	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
Endrin	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
Endosulfan II	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
4,4'-DDD	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
Endosulfan sulfate	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
4,4'-DDT	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
Methoxychlor	UG/L	0.595 UJ	0.61 UJ	ND	ND	0/2
Endrin ketone	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
Endrin aldehyde	UG/L	0.119 UJ	0.122 UJ	ND	ND	0/2
alpha-Chlordane	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
gamma-Chlordane	UG/L	0.06 UJ	0.061 UJ	ND	ND	0/2
Toxaphene	UG/L	5.95 UJ	6.1 UJ	ND	ND	0/2
Aroclor 1016	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2
Aroclor 1221	UG/L	2.38 UJ	2.44 UJ	ND	ND	0/2
Aroclor 1232	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2
Aroclor 1242	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2
Aroclor 1248	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2
Aroclor 1254	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2
Aroclor 1260	UG/L	1.19 UJ	1.22 UJ	ND	ND	0/2



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>						
	<u>CHEMICAL SURETY</u>						
	Acetophenone	UG/L 13.3 U	20 U	ND	ND		0/2
	Chloroacetophenone	UG/L 13.3 U	20 U	ND	ND		0/2
	Hydroxyacetophenone	UG/L 66.6 U	100 U	ND	ND		0/2
	Bis(2'-chloroethyl)disulfide	UG/L 66.6 U	100 U	ND	ND		0/2
	Bis(2'-chloroethyl)trisulfide	UG/L 66.6 U	100 U	ND	ND		0/2
	1,4-Dithiane	UG/L 13.3 U	20 U	ND	ND		0/2
	1,4-Oxathiane	UG/L 13.3 U	20 U	ND	ND		0/2
	<u>THIODIGLYCOL</u>						
	Thiodiglycol	UG/L 25 U	25 U	ND	ND		0/2

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW02DD	69GW02DW	69GW03DW	69GW12DW	69GW13DW	69GW14DW	69GW14IW
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA	NA
Date Sampled:	02/24/95	02/24/95	02/25/95	02/23/95	02/22/95	02/23/95	02/23/95

UNITS

PURGEABLE HALOCARBONS 601

Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorovinyl ether	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	UG/L	5 U	8	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2,-Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>PURGEABLE HALOCARBONS 601</u>						
Bromodichloromethane	UG/L	5 U	5 U	ND	ND	0/7
Bromoform	UG/L	5 U	5 U	ND	ND	0/7
Bromomethane	UG/L	5 U	5 U	ND	ND	0/7
Carbon Tetrachloride	UG/L	5 U	5 U	ND	ND	0/7
Chlorobenzene	UG/L	5 U	5 U	ND	ND	0/7
Chloroethane	UG/L	5 U	5 U	ND	ND	0/7
2-Chlorovinyl ether	UG/L	5 U	5 U	ND	ND	0/7
Chloroform	UG/L	5 U	5 U	ND	ND	0/7
Chloromethane	UG/L	5 U	5 U	ND	ND	0/7
Dibromochloromethane	UG/L	5 U	5 U	ND	ND	0/7
1,2-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/7
1,3-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/7
1,4-Dichlorobenzene	UG/L	5 U	5 U	ND	ND	0/7
Dichlorodifluoromethane	UG/L	5 U	5 U	ND	ND	0/7
1,1-Dichloroethane	UG/L	5 U	5 U	ND	ND	0/7
1,2-Dichloroethane	UG/L	5 U	5 U	ND	ND	0/7
1,1-Dichloroethene	UG/L	5 U	5 U	ND	ND	0/7
trans-1,2-Dichloroethene	UG/L	5 U	5 U	8	8	69-GW02DW 1/7
1,2-Dichloropropane	UG/L	5 U	5 U	ND	ND	0/7
cis-1,3-Dichloropropene	UG/L	5 U	5 U	ND	ND	0/7
trans-1,3-Dichloropropene	UG/L	5 U	5 U	ND	ND	0/7
Methylene Chloride	UG/L	5 U	5 U	ND	ND	0/7
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U	ND	ND	0/7
Tetrachloroethene	UG/L	5 U	5 U	ND	ND	0/7
Trichloroethene	UG/L	5 U	5 U	ND	ND	0/7
1,1,1-Trichloroethane	UG/L	5 U	5 U	ND	ND	0/7
1,1,2-Trichloroethane	UG/L	5 U	5 U	ND	ND	0/7
Trichlorofluoromethane	UG/L	5 U	5 U	ND	ND	0/7
Vinyl Chloride	UG/L	5 U	5 U	ND	ND	0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02DD-04	69-GW02DW-04	69-GW03IW-04	69-GW13IW-04	69-GW14DW-03	69-GW14IW-03
Laboratory Sample ID:	C5C280034003	C5C280034005	C5C280034001	C5C280034006	C5C280034009	C5C280034010
Date Sampled:	03/25/95	03/25/95	03/25/95	03/26/95	03/26/95	03/26/95

UNITS

VOLATILES

	69-GW02DD-04	69-GW02DW-04	69-GW03IW-04	69-GW13IW-04	69-GW14DW-03	69-GW14IW-03
Chloromethane	UG/L	10 U	10 U	10 U	10 U	10 U
Bromomethane	UG/L	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	UG/L	10 U	10 U	10 U	10 U	10 U
Chloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Methylene chloride	UG/L	10 U	10 U	10 U	10 U	10 U
Acetone	UG/L	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	UG/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	UG/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	UG/L	3 J	54	10 U	11	10 U
Chloroform	UG/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Methyl ethyl ketone	UG/L	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	UG/L	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	UG/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	UG/L	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	UG/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	UG/L	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	UG/L	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Benzene	UG/L	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	UG/L	10 U	10 U	10 U	10 U	10 U
Bromoform	UG/L	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	UG/L	10 R	10 R	10 R	10 R	10 R
2-Hexanone	UG/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	UG/L	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Toluene	UG/L	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	UG/L	10 U	10 U	10 U	10 U	10 U
Styrene	UG/L	10 U	10 U	10 U	10 U	10 U
Xylene (total)	UG/L	10 U	10 U	10 U	10 U	10 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-GW15IW-01  
 Laboratory Sample ID: C5C280034012  
 Date Sampled: 03/26/95

UNITS

VOLATILES

Chloromethane	UG/L	10 U
Bromomethane	UG/L	10 U
Vinyl Chloride	UG/L	97
Chloroethane	UG/L	10 U
Methylene chloride	UG/L	10 U
Acetone	UG/L	10 U
Carbon disulfide	UG/L	10 U
1,1-Dichloroethene	UG/L	3 J
1,1-Dichloroethane	UG/L	10 U
1,2-Dichloroethene (total)	UG/L	2400
Chloroform	UG/L	10 U
1,2-Dichloroethane	UG/L	10 U
Methyl ethyl ketone	UG/L	10 U
1,1,1-Trichloroethane	UG/L	10 U
Carbon tetrachloride	UG/L	10 U
Bromodichloromethane	UG/L	10 U
1,2-Dichloropropane	UG/L	10 U
cis-1,3-Dichloropropene	UG/L	10 U
Trichloroethene	UG/L	6200
Dibromochloromethane	UG/L	10 U
1,1,2-Trichloroethane	UG/L	13
Benzene	UG/L	10 U
trans-1,3-Dichloropropene	UG/L	10 U
Bromoform	UG/L	10 U
4-Methyl-2-Pentanone	UG/L	10 R
2-Hexanone	UG/L	10 U
Tetrachloroethene	UG/L	14
1,1,2,2-Tetrachloroethane	UG/L	4 J
Toluene	UG/L	10 U
Chlorobenzene	UG/L	10 U
Ethylbenzene	UG/L	10 U
Styrene	UG/L	10 U
Xylene (total)	UG/L	10 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/L	10 U	10 U	ND	ND	0/7
Bromomethane	UG/L	10 U	10 U	ND	ND	0/7
Vinyl Chloride	UG/L	10 U	10 U	97	97	69-GW15IW-01 1/7
Chloroethane	UG/L	10 U	10 U	ND	ND	0/7
Methylene chloride	UG/L	10 U	10 U	ND	ND	0/7
Acetone	UG/L	10 U	10 U	ND	ND	0/7
Carbon disulfide	UG/L	10 U	10 U	ND	ND	0/7
1,1-Dichloroethene	UG/L	10 U	10 U	3 J	3 J	69-GW15IW-01 1/7
1,1-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/7
1,2-Dichloroethene (total)	UG/L	10 U	10 U	3 J	2400	69-GW15IW-01 4/7
Chloroform	UG/L	10 U	10 U	ND	ND	0/7
1,2-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/7
Methyl ethyl ketone	UG/L	10 U	10 U	ND	ND	0/7
1,1,1-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/7
Carbon tetrachloride	UG/L	10 U	10 U	ND	ND	0/7
Bromodichloromethane	UG/L	10 U	10 U	ND	ND	0/7
1,2-Dichloropropane	UG/L	10 U	10 U	ND	ND	0/7
cis-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/7
Trichloroethene	UG/L	10 U	10 U	6200	6200	69-GW15IW-01 1/7
Dibromochloromethane	UG/L	10 U	10 U	ND	ND	0/7
1,1,2-Trichloroethane	UG/L	10 U	10 U	13	13	69-GW15IW-01 1/7
Benzene	UG/L	10 U	10 U	ND	ND	0/7
trans-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/7
Bromoform	UG/L	10 U	10 U	ND	ND	0/7
4-Methyl-2-Pentanone	UG/L	NA	NA	ND	ND	0/0
2-Hexanone	UG/L	10 U	10 U	ND	ND	0/7
Tetrachloroethene	UG/L	10 U	10 U	14	14	69-MW15IW-01 1/7
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U	4 J	4 J	69-MW15IW-01 1/7
Toluene	UG/L	10 U	10 U	ND	ND	0/7
Chlorobenzene	UG/L	10 U	10 U	ND	ND	0/7
Ethylbenzene	UG/L	10 U	10 U	ND	ND	0/7
Styrene	UG/L	10 U	10 U	ND	ND	0/7
Xylene (total)	UG/L	10 U	10 U	ND	ND	0/7

**APPENDIX O.9**  
**SITE 69 DEEP GROUNDWATER TOTAL METALS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:	34382	34383

---

	<u>UNITS</u>		
Aluminum	UG/L	3030	4680 J
Antimony	UG/L	7.6 U	7.6 U
Arsenic	UG/L	2.2 U	3.54 J
Barium	UG/L	42.3	58
Beryllium	UG/L	0.76 U	0.89
Cadmium	UG/L	3.19 U	3.19 U
Calcium	UG/L	59300	180000
Chromium	UG/L	8.31 U	20.7
Cobalt	UG/L	16 U	16 U
Copper	UG/L	16.3 U	16.3 U
Iron	UG/L	5820	10900
Lead	UG/L	3.1	6.84 U
Magnesium	UG/L	2590	4890
Manganese	UG/L	53.7	114
Mercury	UG/L	0.174	0.156 U
Nickel	UG/L	28.8 U	28.8 U
Potassium	UG/L	1850	1660
Selenium	UG/L	1.6 U	1.6 UJ
Silver	UG/L	1.6 U	1.6 U
Sodium	UG/L	33000	10900
Thallium	UG/L	3 U	3 U
Vanadium	UG/L	20.4 U	20.4 U
Zinc	UG/L	31.1	48.7 U
Total Cyanide	UG/L	5 U	5 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:						LOCATION OF	FREQUENCY
Laboratory Sample ID:	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM		MAXIMUM	OF
Date Sampled:	NONDETECTED	NONDETECTED	DETECTED	DETECTED		DETECTED	DETECTION
	<u>UNITS</u>						
Aluminum	UG/L	NA	NA	3030	4680 J	69-GW12DW-01	2/2
Antimony	UG/L	7.6 U	7.6 U	ND	ND		0/2
Arsenic	UG/L	2.2 U	2.2 U	3.54 J	3.54 J	69-GW12DW-01	1/2
Barium	UG/L	NA	NA	42.3	58	69-GW12DW-01	2/2
Beryllium	UG/L	0.76 U	0.76 U	0.89	0.89	69-GW12DW-01	1/2
Cadmium	UG/L	3.19 U	3.19 U	ND	ND		0/2
Calcium	UG/L	NA	NA	59300	180000	69-GW12DW-01	2/2
Chromium	UG/L	8.31 U	8.31 U	20.7	20.7	69-GW12DW-01	1/2
Cobalt	UG/L	16 U	16 U	ND	ND		0/2
Copper	UG/L	16.3 U	16.3 U	ND	ND		0/2
Iron	UG/L	NA	NA	5820	10900	69-GW12DW-01	2/2
Lead	UG/L	6.84 U	6.84 U	3.1	3.1	69-GW02-DW-01	1/2
Magnesium	UG/L	NA	NA	2590	4890	69-GW12DW-01	2/2
Manganese	UG/L	NA	NA	53.7	114	69-GW12DW-01	2/2
Mercury	UG/L	0.156 U	0.156 U	0.174	0.174	69-GW02-DW-01	1/2
Nickel	UG/L	28.8 U	28.8 U	ND	ND		0/2
Potassium	UG/L	NA	NA	1660	1850	69-GW02-DW-01	2/2
Selenium	UG/L	1.6 U	1.6 U	ND	ND		0/2
Silver	UG/L	1.6 U	1.6 U	ND	ND		0/2
Sodium	UG/L	NA	NA	10900	33000	69-GW02-DW-01	2/2
Thallium	UG/L	3 U	3 U	ND	ND		0/2
Vanadium	UG/L	20.4 U	20.4 U	ND	ND		0/2
Zinc	UG/L	48.7 U	48.7 U	31.1	31.1	69-GW02-DW-01	1/2
Total Cyanide	UG/L	5 U	5 U	ND	ND		0/2

**APPENDIX O.10**  
**SITE 69 DEEP GROUNDWATER DISSOLVED METALS**

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW02DWD-01	69-GW12DWD-01
Laboratory Sample ID:	9402153-03	9402150-02
Date Sampled:	34382	34383

---

	<u>UNITS</u>		
Aluminum	UG/L	139 UJ	139 UJ
Antimony	UG/L	7.6 U	7.6 U
Arsenic	UG/L	2.2 U	2.2 U
Barium	UG/L	19.8	23.3
Beryllium	UG/L	0.76 U	0.76 U
Cadmium	UG/L	3.19 U	3.19 U
Calcium	UG/L	37600	63600
Chromium	UG/L	8.31 U	8.31 U
Cobalt	UG/L	16 U	16 U
Copper	UG/L	16.3 U	16.3 U
Iron	UG/L	54.9 U	54.9 U
Lead	UG/L	1 U	1 U
Magnesium	UG/L	2130	2880
Manganese	UG/L	11.5	60.1
Mercury	UG/L	0.146 U	0.156 U
Nickel	UG/L	28.8 U	28.8 U
Potassium	UG/L	1670	1660
Selenium	UG/L	1.6 UJ	1.6 UJ
Silver	UG/L	1.6 U	1.6 U
Sodium	UG/L	34700	13700
Thallium	UG/L	3 U	3 U
Vanadium	UG/L	20.4 U	20.4 U
Zinc	UG/L	10.6 U	10.6 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>					
Aluminum	UG/L	139 UJ	139 UJ	ND	ND	0/2
Antimony	UG/L	7.6 U	7.6 U	ND	ND	0/2
Arsenic	UG/L	2.2 U	2.2 U	ND	ND	0/2
Barium	UG/L	NA	NA	19.8	23.3	69-GW12DWD-01
Beryllium	UG/L	0.76 U	0.76 U	ND	ND	0/2
Cadmium	UG/L	3.19 U	3.19 U	ND	ND	0/2
Calcium	UG/L	NA	NA	37600	63600	69-GW12DWD-01
Chromium	UG/L	8.31 U	8.31 U	ND	ND	0/2
Cobalt	UG/L	16 U	16 U	ND	ND	0/2
Copper	UG/L	16.3 U	16.3 U	ND	ND	0/2
Iron	UG/L	54.9 U	54.9 U	ND	ND	0/2
Lead	UG/L	1 U	1 U	ND	ND	0/2
Magnesium	UG/L	NA	NA	2130	2880	69-GW12DWD-01
Manganese	UG/L	NA	NA	11.5	60.1	69-GW12DWD-01
Mercury	UG/L	0.146 U	0.156 U	ND	ND	0/2
Nickel	UG/L	28.8 U	28.8 U	ND	ND	0/2
Potassium	UG/L	NA	NA	1660	1670	69-GW02DWD-01
Selenium	UG/L	1.6 UJ	1.6 UJ	ND	ND	0/2
Silver	UG/L	1.6 U	1.6 U	ND	ND	0/2
Sodium	UG/L	NA	NA	13700	34700	69-GW02DWD-01
Thallium	UG/L	3 U	3 U	ND	ND	0/2
Vanadium	UG/L	20.4 U	20.4 U	ND	ND	0/2
Zinc	UG/L	10.6 U	10.6 U	ND	ND	0/2

**APPENDIX O.11**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SURFACE WATER ORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

SEMIVOLATILES

	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03	
1,2-Dichlorobenzene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
1,2,4-Trichlorobenzene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
1,3-Dichlorobenzene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
1,4-Dichlorobenzene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2-Chloronaphthalene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2-Chlorophenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2-Methylnaphthalene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2-Methylphenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2-Nitroaniline	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
2-Nitrophenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,4-Dichlorophenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,4-Dimethylphenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,4-Dinitrophenol	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
2,4-Dinitrotoluene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,4,5-Trichlorophenol	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
2,4,6-Trichlorophenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
2,6-Dinitrotoluene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
3-Nitroaniline	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
3,3'-Dichlorobenzidine	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Bromophenyl-phenylether	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Chloro-3-methylphenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Chloroaniline	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Chlorophenyl phenyl ether	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Methylphenol	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
4-Nitroaniline	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
4-Nitrophenol	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
4,6-Dinitro-2-methylphenol	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
Acenaphthene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Acenaphthylene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Anthracene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Benzo[a]anthracene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Benzo[a]pyrene	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

SEMIVOLATILES Cont.

Compound	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Benzo[b]fluoranthene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Benzo[g,h,i]perylene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Benzo[k]fluoranthene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
bis(2-Chloroethoxy) methane	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
bis(2-Chloroethyl) ether	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
bis(2-Ethylhexyl)phthalate	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Butyl benzyl phthalate	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Carbazole	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Chrysene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Dibenzofuran	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Dibenz[a,h]anthracene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Diethylphthalate	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Dimethyl phthalate	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
di-n-Butylphthalate	UG/L 10.4 U	11.1 U	11.8 U	1.00 J	13.5 U	20.0 U
di-n-Octylphthalate	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Fluoranthene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Fluorene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Hexachlorobenzene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Hexachlorobutadiene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Hexachlorocyclopentadiene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Hexachloroethane	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Indeno[1,2,3-cd]pyrene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Isophorone	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Naphthalene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Nitrobenzene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
N-Nitroso-di-n-propylamine	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
N-nitrosodiphenylamine	UG/L 10.4 UJ	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Pentachlorophenol	UG/L 26.0 U	27.8 U	29.5 U	33.8 U	33.8 U	50.0 U
Phenanthrene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Phenol	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U
Pyrene	UG/L 10.4 U	11.1 U	11.8 U	13.5 U	13.5 U	20.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

	UNITS						
<u>VOLATILES</u>							
Chloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromomethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Vinyl chloride	UG/L	8.00 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Chloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Methylene chloride	UG/L	10.00 U	10.00 U	10.00 U	10.00 U	10.00 U	10.00 U
Acetone	UG/L	10.00 U	10.00 U	10.00 U	3.00 J	10.00 U	10.00 U
Carbon Disulfide	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-Dichloroethene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-Dichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloroethene(total)	UG/L	55.0	13.0	10.0 U	10.0 U	10.0 U	10.0 U
Chloroform	UG/L	2.00 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Butanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,1-Trichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon tetrachloride	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromodichloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-Dichloropropane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
cis-1,3-Dichloropropene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Trichloroethene	UG/L	4.00 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Dibromochloromethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2-Trichloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trans-1,3-Dichloropropene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Bromoform	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Methyl-2-pentanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Hexanone	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Tetrachloroethene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2,2-Tetrachloroethane	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Toluene	UG/L	10.0 U	1.00 J	10.0 U	1.00 J	10.0 U	10.0 U
Chlorobenzene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Ethylbenzene	UG/L	10.0 U	10.0 U	10.0 U	1.00 J	10.0 U	10.0 U
Styrene	UG/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Xylenes (total)	UG/L	10.0 U	10.0 U	10.0 U	10.0	10.0 U	10.0 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03	
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A	
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94	
	UNITS						
<u>PESTICIDE/PCBS</u>							
alpha-BHC	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
beta-BHC	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
delta-BHC	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Lindane (gamma-BHC)	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Heptachlor	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Aldrin	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Heptachlor epoxide	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Endosulfan I	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Dieldrin	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
4,4'-DDE	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
Endrin	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
Endosulfan II	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
4,4'-DDD	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
Endosulfan sulfate	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
4,4'-DDT	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
Methoxychlor	UG/L	0.521 UJ	0.549 UJ	0.500 UJ	0.675 UJ	0.649 UJ	0.556 UJ
Endrin ketone	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
Endrin aldehyde	UG/L	0.104 UJ	0.110 UJ	0.100 UJ	0.135 UJ	0.130 UJ	0.111 UJ
alpha-Chlordane	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
gamma-Chlordane	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ	0.056 UJ
Toxaphene	UG/L	5.21 UJ	5.49 UJ	5.00 UJ	6.75 UJ	6.49 UJ	5.56 UJ
Aroclor 1016	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ
Aroclor 1221	UG/L	2.08 UJ	2.20 UJ	2.00 UJ	2.70 UJ	2.60 UJ	2.22 UJ
Aroclor 1232	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ
Aroclor 1242	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ
Aroclor 1248	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ
Aroclor 1254	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ
Aroclor 1260	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ	1.11 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94
	<u>UNITS</u>					
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	20.0 U
Chloroacetophenone	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	20.0 U
Hydroxyacetophenone	UG/L	52.0 U	55.5 U	59.0 U	67.5 U	100.0 U
Bis(2'-chloroethyl)disulfide	UG/L	52.0 U	55.5 U	59.0 U	67.5 U	100.0 U
Bis(2'-chloroethyl)trisulfide	UG/L	52.0 U	55.5 U	59.0 U	67.5 U	100.0 U
1,4-Dithiane	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	20.0 U
1,4-Oxathiane	UG/L	10.4 U	11.1 U	11.8 U	13.5 U	20.0 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	UG/L	25.0 UJ	25.0 UJ	25.0 UJ	25.0 UJ	25.0 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	UNITS	
<u>SEMIVOLATILES</u>		
1,2-Dichlorobenzene	UG/L	11.8 U
1,2,4-Trichlorobenzene	UG/L	11.8 U
1,3-Dichlorobenzene	UG/L	11.8 U
1,4-Dichlorobenzene	UG/L	11.8 U
2-Chloronaphthalene	UG/L	11.8 U
2-Chlorophenol	UG/L	11.8 U
2-Methylnaphthalene	UG/L	11.8 U
2-Methylphenol	UG/L	11.8 U
2-Nitroaniline	UG/L	29.5 U
2-Nitrophenol	UG/L	11.8 U
2,2'-oxybis-(1-chloropropane)	UG/L	11.8 U
2,4-Dichlorophenol	UG/L	11.8 U
2,4-Dimethylphenol	UG/L	11.8 U
2,4-Dinitrophenol	UG/L	29.5 U
2,4-Dinitrotoluene	UG/L	11.8 U
2,4,5-Trichlorophenol	UG/L	29.5 U
2,4,6-Trichlorophenol	UG/L	11.8 U
2,6-Dinitrotoluene	UG/L	11.8 U
3-Nitroaniline	UG/L	29.5 U
3,3'-Dichlorobenzidine	UG/L	11.8 U
4-Bromophenyl-phenylether	UG/L	11.8 U
4-Chloro-3-methylphenol	UG/L	11.8 U
4-Chloroaniline	UG/L	11.8 U
4-Chlorophenyl phenyl ether	UG/L	11.8 U
4-Methylphenol	UG/L	11.8 U
4-Nitroaniline	UG/L	29.5 U
4-Nitrophenol	UG/L	29.5 U
4,6-Dinitro-2-methylphenol	UG/L	29.5 U
Acenaphthene	UG/L	11.8 U
Acenaphthylene	UG/L	11.8 U
Anthracene	UG/L	11.8 U
Benzo[a]anthracene	UG/L	11.8 U
Benzo[a]pyrene	UG/L	11.8 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	11.8 U
Benzo[g,h,i]perylene	UG/L	11.8 U
Benzo[k]fluoranthene	UG/L	11.8 U
bis(2-Chloroethoxy) methane	UG/L	11.8 U
bis(2-Chloroethyl) ether	UG/L	11.8 U
bis(2-Ethylhexyl)phthalate	UG/L	11.8 U
Butyl benzyl phthalate	UG/L	11.8 U
Carbazole	UG/L	11.8 U
Chrysene	UG/L	11.8 U
Dibenzofuran	UG/L	11.8 U
Dibenz[a,h]anthracene	UG/L	11.8 U
Diethylphthalate	UG/L	11.8 U
Dimethyl phthalate	UG/L	11.8 U
di-n-Butylphthalate	UG/L	11.8 U
di-n-Octylphthalate	UG/L	11.8 U
Fluoranthene	UG/L	11.8 U
Fluorene	UG/L	11.8 U
Hexachlorobenzene	UG/L	11.8 U
Hexachlorobutadiene	UG/L	11.8 U
Hexachlorocyclopentadiene	UG/L	11.8 U
Hexachloroethane	UG/L	11.8 U
Indeno[1,2,3-cd]pyrene	UG/L	11.8 U
Isophorone	UG/L	11.8 U
Naphthalene	UG/L	11.8 U
Nitrobenzene	UG/L	11.8 U
N-Nitroso-di-n-propylamine	UG/L	11.8 U
N-nitrosodiphenylamine	UG/L	11.8 U
Pentachlorophenol	UG/L	29.5 U
Phenanthrene	UG/L	11.8 U
Phenol	UG/L	11.8 U
Pyrene	UG/L	11.8 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	<u>UNITS</u>	
<u>VOLATILES</u>		
Chloromethane	UG/L	10.0 U
Bromomethane	UG/L	10.0 U
Vinyl chloride	UG/L	10.0 U
Chloroethane	UG/L	10.0 U
Methylene chloride	UG/L	10.00 U
Acetone	UG/L	9.00 J
Carbon Disulfide	UG/L	10.0 U
1,1-Dichloroethene	UG/L	10.0 U
1,1-Dichloroethane	UG/L	10.0 U
1,2-Dichloroethene(total)	UG/L	10.0 U
Chloroform	UG/L	10.0 U
1,2-Dichloroethane	UG/L	10.0 U
2-Butanone	UG/L	10.0 U
1,1,1-Trichloroethane	UG/L	10.0 U
Carbon tetrachloride	UG/L	10.0 U
Bromodichloromethane	UG/L	10.0 U
1,2-Dichloropropane	UG/L	10.0 U
cis-1,3-Dichloropropene	UG/L	10.0 U
Trichloroethene	UG/L	10.0 U
Dibromochloromethane	UG/L	10.0 U
1,1,2-Trichloroethane	UG/L	10.0 U
Benzene	UG/L	10.0 U
trans-1,3-Dichloropropene	UG/L	10.0 U
Bromoform	UG/L	10.0 U
4-Methyl-2-pentanone	UG/L	10.0 U
2-Hexanone	UG/L	10.0 U
Tetrachloroethene	UG/L	10.0 U
1,1,2,2-Tetrachloroethane	UG/L	10.0 U
Toluene	UG/L	10.0 U
Chlorobenzene	UG/L	10.0 U
Ethylbenzene	UG/L	10.0 U
Styrene	UG/L	10.0 U
Xylenes (total)	UG/L	10.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	<u>UNITS</u>	
<u>PESTICIDE/PCBS</u>		
alpha-BHC	UG/L	0.053 UJ
beta-BHC	UG/L	0.053 UJ
delta-BHC	UG/L	0.053 UJ
Lindane (gamma-BHC)	UG/L	0.053 UJ
Heptachlor	UG/L	0.053 UJ
Aldrin	UG/L	0.053 UJ
Heptachlor epoxide	UG/L	0.053 UJ
Endosulfan I	UG/L	0.053 UJ
Dieldrin	UG/L	0.106 UJ
4,4'-DDE	UG/L	0.106 UJ
Endrin	UG/L	0.106 UJ
Endosulfan II	UG/L	0.106 UJ
4,4'-DDD	UG/L	0.106 UJ
Endosulfan sulfate	UG/L	0.106 UJ
4,4'-DDT	UG/L	0.106 UJ
Methoxychlor	UG/L	0.532 UJ
Endrin ketone	UG/L	0.106 UJ
Endrin aldehyde	UG/L	0.106 UJ
alpha-Chlordane	UG/L	0.053 UJ
gamma-Chlordane	UG/L	0.053 UJ
Toxaphene	UG/L	5.32 UJ
Aroclor 1016	UG/L	1.06 UJ
Aroclor 1221	UG/L	2.13 UJ
Aroclor 1232	UG/L	1.06 UJ
Aroclor 1242	UG/L	1.06 UJ
Aroclor 1248	UG/L	1.06 UJ
Aroclor 1254	UG/L	1.06 UJ
Aroclor 1260	UG/L	1.06 UJ

FREQUENCY OF DETECTION SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SURFACE WATER  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
ORGANICS

Client Sample ID: 69-DA-SW04  
Laboratory Sample ID: 9401053-03A  
Date Sampled: 01/09/94

---

	<u>UNITS</u>	
<u>CHEMICAL SURETY</u>		
Acetophenone	UG/L	11.8 U
Chloroacetophenone	UG/L	11.8 U
Hydroxyacetophenone	UG/L	59.0 U
Bis(2'-chloroethyl)disulfide	UG/L	59.0 U
Bis(2'-chloroethyl)trisulfide	UG/L	59.0 U
1,4-Dithiane	UG/L	11.8 U
1,4-Oxathiane	UG/L	11.8 U
<u>THIODIGLYCOL</u>		
Thiodiglycol	UG/L	25.0 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>						
	<u>SEMIVOLATILES</u>						
	1,2-Dichlorobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
	1,2,4-Trichlorobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
	1,3-Dichlorobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
	1,4-Dichlorobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
	2-Chloronaphthalene	UG/L	10.4 U	20 U	ND	ND	0/7
	2-Chlorophenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2-Methylnaphthalene	UG/L	10.4 U	20 U	ND	ND	0/7
	2-Methylphenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2-Nitroaniline	UG/L	26 U	50 U	ND	ND	0/7
	2-Nitrophenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2,2'-oxybis-(1-chloropropane)	UG/L	10.4 U	20 U	ND	ND	0/7
	2,4-Dichlorophenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2,4-Dimethylphenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2,4-Dinitrophenol	UG/L	26 U	50 U	ND	ND	0/7
	2,4-Dinitrotoluene	UG/L	10.4 U	20 U	ND	ND	0/7
	2,4,5-Trichlorophenol	UG/L	26 U	50 U	ND	ND	0/7
	2,4,6-Trichlorophenol	UG/L	10.4 U	20 U	ND	ND	0/7
	2,6-Dinitrotoluene	UG/L	10.4 U	20 U	ND	ND	0/7
	3-Nitroaniline	UG/L	26 U	50 U	ND	ND	0/7
	3,3'-Dichlorobenzidine	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Bromophenyl-phenylether	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Chloro-3-methylphenol	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Chloroaniline	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Chlorophenyl phenyl ether	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Methylphenol	UG/L	10.4 U	20 U	ND	ND	0/7
	4-Nitroaniline	UG/L	26 U	50 U	ND	ND	0/7
	4-Nitrophenol	UG/L	26 U	50 U	ND	ND	0/7
	4,6-Dinitro-2-methylphenol	UG/L	26 U	50 U	ND	ND	0/7
	Acenaphthene	UG/L	10.4 U	20 U	ND	ND	0/7
	Acenaphthylene	UG/L	10.4 U	20 U	ND	ND	0/7
	Anthracene	UG/L	10.4 U	20 U	ND	ND	0/7
	Benzo[a]anthracene	UG/L	10.4 U	20 U	ND	ND	0/7
	Benzo[a]pyrene	UG/L	10.4 U	20 U	ND	ND	0/7



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/L	10.4 U	20 U	ND		0/7
Benzo[g,h,i]perylene	UG/L	10.4 U	20 U	ND		0/7
Benzo[k]fluoranthene	UG/L	10.4 U	20 U	ND		0/7
bis(2-Chloroethoxy) methane	UG/L	10.4 U	20 U	ND		0/7
bis(2-Chloroethyl) ether	UG/L	10.4 U	20 U	ND		0/7
bis(2-Ethylhexyl)phthalate	UG/L	10.4 U	20 U	ND		0/7
Butyl benzyl phthalate	UG/L	10.4 U	20 U	ND		0/7
Carbazole	UG/L	10.4 U	20 U	ND		0/7
Chrysene	UG/L	10.4 U	20 U	ND		0/7
Dibenzofuran	UG/L	10.4 U	20 U	ND		0/7
Dibenz[a,h]anthracene	UG/L	10.4 U	20 U	ND		0/7
Diethylphthalate	UG/L	10.4 U	20 U	ND		0/7
Dimethyl phthalate	UG/L	10.4 U	20 U	ND		0/7
di-n-Butylphthalate	UG/L	10.4 U	20 U	1 J	1 J	69-DA-SW01 1/7
di-n-Octylphthalate	UG/L	10.4 U	20 U	ND	ND	0/7
Fluoranthene	UG/L	10.4 U	20 U	ND	ND	0/7
Fluorene	UG/L	10.4 U	20 U	ND	ND	0/7
Hexachlorobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
Hexachlorobutadiene	UG/L	10.4 U	20 U	ND	ND	0/7
Hexachlorocyclopentadiene	UG/L	10.4 U	20 U	ND	ND	0/7
Hexachloroethane	UG/L	10.4 U	20 U	ND	ND	0/7
Indeno[1,2,3-cd]pyrene	UG/L	10.4 U	20 U	ND	ND	0/7
Isophorone	UG/L	10.4 U	20 U	ND	ND	0/7
Naphthalene	UG/L	10.4 U	20 U	ND	ND	0/7
Nitrobenzene	UG/L	10.4 U	20 U	ND	ND	0/7
N-Nitroso-di-n-propylamine	UG/L	10.4 U	20 U	ND	ND	0/7
N-nitrosodiphenylamine	UG/L	10.4 U	20 U	ND	ND	0/7
Pentachlorophenol	UG/L	26 U	50 U	ND	ND	0/7
Phenanthrene	UG/L	10.4 U	20 U	ND	ND	0/7
Phenol	UG/L	10.4 U	20 U	ND	ND	0/7
Pyrene	UG/L	10.4 U	20 U	ND	ND	0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>UNITS</u>						
<u>VOLATILES</u>						
Chloromethane	UG/L	10 U	10 U	ND	ND	0/7
Bromomethane	UG/L	10 U	10 U	ND	ND	0/7
Vinyl chloride	UG/L	10 U	10 U	8 J	8 J	69-OS-SW01 1/7
Chloroethane	UG/L	10 U	10 U	ND	ND	0/7
Methylene chloride	UG/L	10 U	10 U	ND	ND	0/7
Acetone	UG/L	10 U	10 U	3 J	9 J	69-DA-SW04 2/7
Carbon Disulfide	UG/L	10 U	10 U	ND	ND	0/7
1,1-Dichloroethene	UG/L	10 U	10 U	ND	ND	0/7
1,1-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/7
1,2-Dichloroethene(total)	UG/L	10 U	10 U	13	55	69-OS-SW01 2/7
Chloroform	UG/L	10 U	10 U	2 J	2 J	69-OS-SW01 1/7
1,2-Dichloroethane	UG/L	10 U	10 U	ND	ND	0/7
2-Butanone	UG/L	10 U	10 U	ND	ND	0/7
1,1,1-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/7
Carbon tetrachloride	UG/L	10 U	10 U	ND	ND	0/7
Bromodichloromethane	UG/L	10 U	10 U	ND	ND	0/7
1,2-Dichloropropane	UG/L	10 U	10 U	ND	ND	0/7
cis-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/7
Trichloroethene	UG/L	10 U	10 U	4 J	4 J	69-OS-SW01 1/7
Dibromochloromethane	UG/L	10 U	10 U	ND	ND	0/7
1,1,2-Trichloroethane	UG/L	10 U	10 U	ND	ND	0/7
Benzene	UG/L	10 U	10 U	ND	ND	0/7
trans-1,3-Dichloropropene	UG/L	10 U	10 U	ND	ND	0/7
Bromoform	UG/L	10 U	10 U	ND	ND	0/7
4-Methyl-2-pentanone	UG/L	10 U	10 U	ND	ND	0/7
2-Hexanone	UG/L	10 U	10 U	ND	ND	0/7
Tetrachloroethene	UG/L	10 U	10 U	ND	ND	0/7
1,1,2,2-Tetrachloroethane	UG/L	10 U	10 U	ND	ND	0/7
Toluene	UG/L	10 U	10 U	1 J	1 J	69-DA-SW01 2/7
Chlorobenzene	UG/L	10 U	10 U	ND	ND	0/7
Ethylbenzene	UG/L	10 U	10 U	1 J	1 J	69-DA-SW01 1/7
Styrene	UG/L	10 U	10 U	ND	ND	0/7
Xylenes (total)	UG/L	10 U	10 U	10	10	69-DA-SW04 1/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	UNITS					
	<u>PESTICIDE/PCBS</u>					
alpha-BHC	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
beta-BHC	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
delta-BHC	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Lindane (gamma-BHC)	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Heptachlor	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Aldrin	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Heptachlor epoxide	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Endosulfan I	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Dieldrin	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
4,4'-DDE	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
Endrin	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
Endosulfan II	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
4,4'-DDD	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
Endosulfan sulfate	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
4,4'-DDT	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
Methoxychlor	UG/L	0.5 UJ	0.675 UJ	ND	ND	0/7
Endrin ketone	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
Endrin aldehyde	UG/L	0.1 UJ	0.135 UJ	ND	ND	0/7
alpha-Chlordane	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
gamma-Chlordane	UG/L	0.05 UJ	0.068 UJ	ND	ND	0/7
Toxaphene	UG/L	5 UJ	6.75 UJ	ND	ND	0/7
Aroclor 1016	UG/L	1 UJ	1.35 UJ	ND	ND	0/7
Aroclor 1221	UG/L	2 UJ	2.7 UJ	ND	ND	0/7
Aroclor 1232	UG/L	1 UJ	1.35 UJ	ND	ND	0/7
Aroclor 1242	UG/L	1 UJ	1.35 UJ	ND	ND	0/7
Aroclor 1248	UG/L	1 UJ	1.35 UJ	ND	ND	0/7
Aroclor 1254	UG/L	1 UJ	1.35 UJ	ND	ND	0/7
Aroclor 1260	UG/L	1 UJ	1.35 UJ	ND	ND	0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	<u>UNITS</u>						
	<u>CHEMICAL SURETY</u>						
	Acetophenone	UG/L 10.4 U	20 U	ND	ND		0/7
	Chloroacetophenone	UG/L 10.4 U	20 U	ND	ND		0/7
	Hydroxyacetophenone	UG/L 52 U	100 U	ND	ND		0/7
	Bis(2'-chloroethyl)disulfide	UG/L 52 U	100 U	ND	ND		0/7
	Bis(2'-chloroethyl)trisulfide	UG/L 52 U	100 U	ND	ND		0/7
	1,4-Dithiane	UG/L 10.4 U	20 U	ND	ND		0/7
	1,4-Oxathiane	UG/L 10.4 U	20 U	ND	ND		0/7
	<u>THIODIGLYCOL</u>						
	Thiodiglycol	UG/L 25 UJ	25 UJ	ND	ND		0/7

**APPENDIX O.12**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SURFACE WATER INORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

	UNITS	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Aluminum	UG/L	972.0	2210.0	487.0	4720.0	29200.0	9780.0
Antimony	UG/L	7.90 U	7.90 U	7.90 U	79.0 U	79.0 U	79.0 U
Arsenic	UG/L	2.90 U	4.10	2.90 U	2.90 UJ	2.90 U	32.8
Barium	UG/L	45.1	66.6	54.1	152.0	373.0	245.0
Beryllium	UG/L	1.30 U	1.30 U	1.30 U	1.30 U	6.00	1.60
Cadmium	UG/L	2.40 U	2.40 U	2.40 U	2.40 U	2.40 U	2.40 U
Calcium	UG/L	5770.0	3080.0	5870.0	73000.0	41300.0	21300.0
Chromium	UG/L	7.20 U	7.20 U	7.20 U	7.20 U	23.8	7.20 U
Cobalt	UG/L	19.4 U	19.4 U	19.4 U	19.4 U	19.4 U	19.4 U
Copper	UG/L	16.2 U	22.8	16.2 U	16.2 U	26.3	35.9
Iron	UG/L	1910.0	3820.0	1090.0	2770.0	13500.0	38400.0
Lead	UG/L	1.00 U	40.1	3.50	10.3	85.8	52.4
Magnesium	UG/L	1460.0	885.0	2400.0	143000.0	38100.0	3840.0
Manganese	UG/L	339.0	73.4	156.0	147.0	421.0	129.0
Mercury	UG/L	0.200 U	0.200 U	0.200 U	0.200 U	0.430	0.200 U
Nickel	UG/L	13.6 U	13.6 U	13.6 U	13.6 U	17.8	13.6 U
Potassium	UG/L	365.0	365.0	300.0 U	37600.0	11200.0	1980.0
Selenium	UG/L	2.50 U	2.50 U	2.50 U	12.5 U	2.50 U	2.50 U
Silver	UG/L	0.400 UJ	0.400 UJ	0.400 UJ	0.910 J	0.740 J	0.400 UJ
Sodium	UG/L	6440.0	4900.0	8820.0	1460000.0	228000.0	6530.0
Thallium	UG/L	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U	4.60 U
Vanadium	UG/L	16.6 U	16.6 U	16.6 U	16.6 U	24.0	23.3
Zinc	UG/L	4370.0	1970.0	1560.0	112.0	96.0	1400.0

FREQUENCY OF DETECTION SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SURFACE WATER  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
TAL METALS

Client Sample ID: 69-DA-SW04  
Laboratory Sample ID: 9401053-03A  
Date Sampled: 01/09/94

---

	<u>UNITS</u>	
Aluminum	UG/L	801.0
Antimony	UG/L	7.90 U
Arsenic	UG/L	2.90 UJ
Barium	UG/L	55.5
Beryllium	UG/L	1.30 U
Cadmium	UG/L	2.40 U
Calcium	UG/L	28400.0
Chromium	UG/L	7.20 U
Cobalt	UG/L	19.4 U
Copper	UG/L	16.2 U
Iron	UG/L	8370.0
Lead	UG/L	3.10
Magnesium	UG/L	4670.0
Manganese	UG/L	157.0
Mercury	UG/L	0.200 U
Nickel	UG/L	13.6 U
Potassium	UG/L	580.0
Selenium	UG/L	2.50 UJ
Silver	UG/L	2.30 J
Sodium	UG/L	8260.0
Thallium	UG/L	4.60 U
Vanadium	UG/L	16.6 U
Zinc	UG/L	296.0

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION	
	<u>UNITS</u>						
Aluminum	UG/L	NA	NA	487	29200	69-DA-SW02	7/7
Antimony	UG/L	7.9 U	79 U	ND	ND		0/7
Arsenic	UG/L	2.9 U	2.9 U	4.1	32.8	69-DA-SW03	2/7
Barium	UG/L	NA	NA	45.1	373	69-DA-SW02	7/7
Beryllium	UG/L	1.3 U	1.3 U	1.6	6	69-DA-SW02	2/7
Cadmium	UG/L	2.4 U	2.4 U	ND	ND		0/7
Calcium	UG/L	NA	NA	3080	73000	69-DA-SW01	7/7
Chromium	UG/L	7.2 U	7.2 U	23.8	23.8	69-DA-SW02	1/7
Cobalt	UG/L	19.4 U	19.4 U	ND	ND		0/7
Copper	UG/L	16.2 U	16.2 U	22.8	35.9	69-DA-SW03	3/7
Iron	UG/L	NA	NA	1090	38400	69-DA-SW03	7/7
Lead	UG/L	1 U	1 U	3.1	85.8	69-DA-SW02	6/7
Magnesium	UG/L	NA	NA	885	143000	69-DA-SW01	7/7
Manganese	UG/L	NA	NA	73.4	421	69-DA-SW02	7/7
Mercury	UG/L	0.2 U	0.2 U	0.43	0.43	69-DA-SW02	1/7
Nickel	UG/L	13.6 U	13.6 U	17.8	17.8	69-DA-SW02	1/7
Potassium	UG/L	300 U	300 U	365	37600	69-DA-SW01	6/7
Selenium	UG/L	2.5 U	12.5 U	ND	ND		0/7
Silver	UG/L	0.4 UJ	0.4 UJ	0.74 J	2.3 J	69-DA-SW04	3/7
Sodium	UG/L	NA	NA	4900	1460000	69-DA-SW01	7/7
Thallium	UG/L	4.6 U	4.6 U	ND	ND		0/7
Vanadium	UG/L	16.6 U	16.6 U	23.3	24	69-DA-SW02	2/7
Zinc	UG/L	NA	NA	96	4370	69-OS-SW01	7/7



**APPENDIX O.13**  
**SITE 69 EVERETT CREEK SURFACE WATER ORGANICS**

SITE 69 EVERETT CREEK SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92
	Lab Id:	00517-22	00424-03	00424-06
Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.05 UJ	0.05 UJ	0.05 U
BETA-BHC	UG/L	0.05 UJ	0.05 UJ	0.05 U
DELTA-BHC	UG/L	0.05 UJ	0.05 UJ	0.05 U
GAMMA-BHC(LINDANE)	UG/L	0.05 UJ	0.05 UJ	0.05 U
HEPTACHLOR	UG/L	0.05 UJ	0.05 UJ	0.05 U
ALDRIN	UG/L	0.05 UJ	0.05 UJ	0.05 U
HEPTACHLOR EPOXIDE	UG/L	0.05 UJ	0.05 UJ	0.05 U
ENDOSULFAN I	UG/L	0.05 UJ	0.05 UJ	0.05 U
DIELDRIN	UG/L	0.1 UJ	0.1 UJ	0.1 U
4,4'-DDE	UG/L	0.1 UJ	0.1 UJ	0.1 U
ENDRIN	UG/L	0.1 UJ	0.1 UJ	0.1 U
ENDOSULFAN II	UG/L	0.1 UJ	0.1 UJ	0.1 U
4,4'-DDD	UG/L	0.1 UJ	0.1 UJ	0.1 U
ENDOSULFAN SULFATE	UG/L	0.1 UJ	0.1 UJ	0.1 U
4,4'-DDT	UG/L	0.1 UJ	0.1 UJ	0.1 U
METHOXYCHLOR	UG/L	0.5 UJ	0.5 UJ	0.5 U
ENDRIN KETONE	UG/L	0.1 UJ	0.1 UJ	0.1 U
ENDRIN ALDEHYDE	UG/L	0.1 UJ	0.1 UJ	0.1 U
ALPHA CHLORDANE	UG/L	0.05 UJ	0.05 UJ	0.05 U
GAMMA CHLORDANE	UG/L	0.05 UJ	0.05 UJ	0.05 U
TOXAPHENE	UG/L	5 UJ	5 UJ	5 U
PCB-1016	UG/L	1 UJ	1 UJ	1 U
PCB-1221	UG/L	2 UJ	2 UJ	2 U
PCB-1232	UG/L	1 UJ	1 UJ	1 U
PCB-1242	UG/L	1 UJ	1 UJ	1 U
PCB-1248	UG/L	1 UJ	1 UJ	1 U
PCB-1254	UG/L	1 UJ	1 UJ	1 U
PCB-1260	UG/L	1 UJ	1 UJ	1 U
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	10 U	10 U	10 U
BROMOMETHANE	UG/L	10 U	10 U	10 U
VINYL CHLORIDE	UG/L	10 U	10 U	10 U
CHLOROETHANE	UG/L	10 U	10 U	10 U
METHYLENE CHLORIDE	UG/L	10 U	10 U	10 U
ACETONE	UG/L	10 UJ	10 U	10 U
CARBON DISULFIDE	UG/L	10 U	10 U	10 U
1,1-DICHLOROETHENE	UG/L	10 U	10 UJ	10 UJ
1,1-DICHLOROETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHENE	UG/L	10 U	10 U	10 U
CHLOROFORM	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHANE	UG/L	10 U	10 U	10 U
2-BUTANONE	UG/L	10 U	10 U	10 U

SITE 69 EVERETT CREEK SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	9/16/92	08/20/92	08/20/92
Lab Id:	00517-22	00424-03	00424-06

Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
CARBON TETRACHLORIDE	UG/L	10 U	10 U	10 U
BROMODICHLOROMETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
TRICHLOROETHENE	UG/L	10 U	10 U	10 U
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	10 U
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
BENZENE	UG/L	10 U	10 U	10 U
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
BROMOFORM	UG/L	10 U	10 U	10 U
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	10 U
2-HEXANONE	UG/L	10 U	10 U	10 U
TETRACHLOROETHENE	UG/L	10 U	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	10 U
TOLUENE	UG/L	10 U	10 U	10 U
CHLOROBENZENE	UG/L	10 U	10 U	10 U
ETHYLBENZENE	UG/L	10 U	10 U	10 U
STYRENE	UG/L	10 U	10 U	10 U
TOTAL XYLENES	UG/L	10 U	10 U	10 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	10 U
2-CHLOROPHENOL	UG/L	10 U	10 U	10 U
1,3-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,4-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,2-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
2-METHYLPHENOL	UG/L	10 U	10 U	10 U
2,2'-OXYBIS (1-CHLOROPROPANE)	UG/L	10 U	10 U	10 U
4-METHYLPHENOL	UG/L	10 U	10 U	10 U
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	10 U
HEXACHLOROETHANE	UG/L	10 U	10 U	10 U
NITROBENZENE	UG/L	10 U	10 U	10 U
ISOPHORONE	UG/L	10 U	10 U	10 U
2-NITROPHENOL	UG/L	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	10 U
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	UG/L	10 U	10 U	10 U
NAPHTHALENE	UG/L	10 U	10 U	10 U
4-CHLORANILINE	UG/L	10 U	10 U	10 U
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	10 U

SITE 69 EVERETT CREEK SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92
	Lab Id:	00517-22	00424-03	00424-06
Parameter	Units			
<u>SEMIVOLATILES (Continued)</u>				
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U	10 U
2-METHYLNAPHTHALENE	UG/L	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U	10 U
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U	25 U
2-CHLORONAPHTHALENE	UG/L	10 U	10 U	10 U
2-NITROANILINE	UG/L	25 U	25 U	25 U
DIMETHYL PHTHALATE	UG/L	10 U	10 U	10 U
ACENAPHTHYLENE	UG/L	10 U	10 U	10 U
2,6-DINITROTOLUENE	UG/L	10 U	10 U	10 U
3-NITROANILINE	UG/L	25 U	25 U	25 U
ACENAPHTHENE	UG/L	10 U	10 U	10 U
2,4-DINITROPHENOL	UG/L	25 U	25 U	25 U
4-NITROPHENOL	UG/L	25 UJ	25 U	25 U
DIBENZOFURAN	UG/L	10 U	10 U	10 U
2,4-DINITROTOLUENE	UG/L	10 U	10 U	10 U
DIETHYL PHTHALATE	UG/L	10 U	10 U	10 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U	10 U
FLUORENE	UG/L	10 U	10 U	10 U
4-NITROANILINE	UG/L	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U	25 U
N-NITRISODIPHENYLAMINE	UG/L	10 U	10 U	10 U
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U	10 U
HEXACHLOROBENZENE	UG/L	10 U	10 U	10 U
PENTACHLOROPHENOL	UG/L	25 U	25 UJ	25 UJ
PHENANTHRENE	UG/L	10 U	10 U	10 U
ANTHRACENE	UG/L	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U	10 U
FLUORANTHENE	UG/L	10 U	10 U	10 U
CARBAZOLE	UG/L	10 U	10 U	10 U
PYRENE	UG/L	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U	10 U
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U	10 U
BENZO(A)ANTHRACENE	UG/L	10 U	10 U	10 U
CHRYSENE	UG/L	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 UJ	10 U	10 U
DI-N-OCTYL PHTHALATE	UG/L	10 UJ	10 U	10 U
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U	10 U
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U	10 U
BENZO(A)PYRENE	UG/L	10 U	10 U	10 U
INDENO(1,2,3-CD) PYRENE	UG/L	10 U	10 U	10 U
DIBENZ(AH)ANTHRACENE	UG/L	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U	10 U

SITE 69 EVERETT CREEK SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>PESTICIDE/PCBs</u>							
ALPHA-BHC	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
BETA-BHC	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
DELTA-BHC	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
GAMMA-BHC(LINDANE)	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
HEPTACHLOR	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
ALDRIN	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
HEPTACHLOR EPOXIDE	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
ENDOSULFAN I	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
DIELDRIN	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
4,4'-DDE	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
ENDRIN	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
ENDOSULFAN II	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
4,4'-DDD	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
ENDOSULFAN SULFATE	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
4,4'-DDT	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
METHOXYCHLOR	UG/L	0.5 UJ	0.5 UJ	ND	ND		0/3
ENDRIN KETONE	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/3
ENDRIN ALDEHYDE	UG/L	0.1 UJ	0.1 UJ	ND	ND		0/1
ALPHA CHLORDANE	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
GAMMA CHLORDANE	UG/L	0.05 UJ	0.05 UJ	ND	ND		0/3
TOXAPHENE	UG/L	5 UJ	5 UJ	ND	ND		0/3
PCB-1016	UG/L	1 UJ	1 UJ	ND	ND		0/3
PCB-1221	UG/L	2 UJ	2 UJ	ND	ND		0/3
PCB-1232	UG/L	1 UJ	1 UJ	ND	ND		0/3
PCB-1242	UG/L	1 UJ	1 UJ	ND	ND		0/3
PCB-1248	UG/L	1 UJ	1 UJ	ND	ND		0/3
PCB-1254	UG/L	1 UJ	1 UJ	ND	ND		0/3
PCB-1260	UG/L	1 UJ	1 UJ	ND	ND		0/3
<u>VOLATILES</u>							
CHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
BROMOMETHANE	UG/L	10 U	10 U	ND	ND		0/3
VINYL CHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
METHYLENE CHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
ACETONE	UG/L	10 UJ	10 UJ	ND	ND		0/3
CARBON DISULFIDE	UG/L	10 U	10 U	ND	ND		0/3
1,1-DICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
1,1-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROFORM	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
2-BUTANONE	UG/L	10 U	10 U	ND	ND		0/3

SITE 69 EVERETT CREEK SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES (Continued)</u>							
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
CARBON TETRACHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
BROMODICHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	ND	ND		0/3
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
TRICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
BENZENE	UG/L	10 U	10 U	ND	ND		0/3
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
BROMOFORM	UG/L	10 U	10 U	ND	ND		0/3
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	ND	ND		0/3
2-HEXANONE	UG/L	10 U	10 U	ND	ND		0/3
TETRACHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
TOLUENE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROENZENE	UG/L	10 U	10 U	ND	ND		0/3
ETHYLBENZENE	UG/L	10 U	10 U	ND	ND		0/3
STYRENE	UG/L	10 U	10 U	ND	ND		0/3
TOTAL XYLENES	UG/L	10 U	10 U	ND	ND		0/3
<u>SEMIVOLATILES</u>							
PHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	ND	ND		0/3
2-CHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,3-DICHLOROENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,4-DICHLOROENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROENZENE	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	10 U	10 U	ND	ND		0/3
4-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
NITROENZENE	UG/L	10 U	10 U	ND	ND		0/3
ISOPHORONE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,2,4-TRICHLOROENZENE	UG/L	10 U	10 U	ND	ND		0/3
NAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLORANILINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	ND	ND		0/3

SITE 69 EVERETT CREEK SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>SEMIVOLATILES (Continued)</u>							
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLNAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U	ND	ND		0/3
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
2-CHLORONAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
DIMETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
ACENAPHTHYLENE	UG/L	10 U	10 U	ND	ND		0/3
2,6-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
3-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
ACENAPHTHENE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
4-NITROPHENOL	UG/L	25 UJ	25 UJ	ND	ND		0/3
DIBENZOFURAN	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
DIETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
FLUORENE	UG/L	10 U	10 U	ND	ND		0/3
4-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U	ND	ND		0/3
N-NITROSODIPHENYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
PENTACHLOROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
PHENANTHRENE	UG/L	10 U	10 U	ND	ND		0/3
ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
CARBAZOLE	UG/L	10 U	10 U	ND	ND		0/3
PYRENE	UG/L	10 U	10 U	ND	ND		0/3
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
CHRYSENE	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 UJ	10 UJ	ND	ND		0/3
DI-N-OCTYL PHTHALATE	UG/L	10 UJ	10 UJ	ND	ND		0/3
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)PYRENE	UG/L	10 U	10 U	ND	ND		0/3
INDENO(1,2,3-CD)PYRENE	UG/L	10 U	10 U	ND	ND		0/3
DIBENZ(AH)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U	ND	ND		0/3

**APPENDIX O.14**  
**SITE 69 EVERETT CREEK SURFACE WATER INORGANICS**



SITE 69 EVERETT CREEK SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	9/16/92	08/20/92	08/20/92
Lab Id:	00517-22	00424-03	00424-06

Parameter	Units			
ALUMINUM	UG/L	110 U	501	445
ANTIMONY	UG/L	14 U	14 U	14 U
ARSENIC	UG/L	3 UJ	3 U	3 U
BARIUM	UG/L	22.2 JB	11.3 BJ	10.4 BJ
BERYLLIUM	UG/L	0.3 UJ	1 U	1 U
CADMIUM	UG/L	1.9 U	2 U	2 U
CALCIUM	UG/L	85200	26400	29300
CHROMIUM	UG/L	5.2 U	4 U	4 U
COBALT	UG/L	2 U	2 U	2 U
COPPER	UG/L	2.6 JB	2.2 U	3.2 U
CYANIDE	UG/L	10 U	10 U	10 U
IRON	UG/L	667	557	490
LEAD	UG/L	1 UJ	2.3 BJ	1.4 B
MAGNESIUM	UG/L	229000	73800	80200
MANGANESE	UG/L	32.5	17.3 J	14.3 BJ
MERCURY	UG/L	0.07 U	0.2 U	0.2 U
NICKEL	UG/L	7.9 UJ	8 U	8 U
POTASSIUM	UG/L	88700	22600	26200
SELENIUM	UG/L	5 U	5 U	5 U
SILVER	UG/L	8.6 UJ	4.1 BJ	3.2 BJ
SODIUM	UG/L	2130000	801000	727000
THALLIUM	UG/L	10 UJ	2 UJ	2 UJ
VANADIUM	UG/L	1.8 U	2 U	2 U
ZINC	UG/L	5.2 U	8 U	9.6 U

SITE 69 EVERETT CREEK SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
ALUMINUM	UG/L	110 U	110 U	445	501	69-EC3-SW-06	2/3
ANTIMONY	UG/L	14 U	14 U	ND	ND		0/3
ARSENIC	UG/L	3 UJ	3 UJ	ND	ND		0/3
BARIUM	UG/L	NA	NA	10.4 BJ	22.2 JB	69-EC1-SW-06	3/3
BERYLLIUM	UG/L	0.3 UJ	1 U	ND	ND		0/3
CADMIUM	UG/L	1.9 U	2 U	ND	ND		0/3
CALCIUM	UG/L	NA	NA	26400	85200	69-EC1-SW-06	3/3
CHROMIUM	UG/L	4 U	5.2 U	ND	ND		0/3
COBALT	UG/L	2 U	2 U	ND	ND		0/3
COPPER	UG/L	2.2 U	3.2 U	2.6 JB	2.6 JB	69-EC1-SW-06	1/3
CYANIDE	UG/L	10 U	10 U	ND	ND		0/3
IRON	UG/L	NA	NA	490	667	69-EC1-SW-06	3/3
LEAD	UG/L	1 UJ	1 UJ	1.4 B	2.3 BJ	69-EC3-SW-06	2/3
MAGNESIUM	UG/L	NA	NA	73800	229000	69-EC1-SW-06	3/3
MANGANESE	UG/L	NA	NA	14.3 BJ	32.5	69-EC1-SW-06	3/3
MERCURY	UG/L	0.07 U	0.2 U	ND	ND		0/3
NICKEL	UG/L	7.9 UJ	8 U	ND	ND		0/3
POTASSIUM	UG/L	NA	NA	22600	88700	69-EC1-SW-06	3/3
SELENIUM	UG/L	5 U	5 U	ND	ND		0/3
SILVER	UG/L	8.6 UJ	8.6 UJ	3.2 BJ	4.1 BJ	69-EC3-SW-06	2/3
SODIUM	UG/L	NA	NA	727000	2130000	69-EC1-SW-06	3/3
THALLIUM	UG/L	2 UJ	10 UJ	ND	ND		0/3
VANADIUM	UG/L	1.8 U	2 U	ND	ND		0/3
ZINC	UG/L	5.2 U	9.6 U	ND	ND		0/3

**APPENDIX O.15**  
**SITE 69 NEW RIVER SURFACE WATER ORGANICS**

SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	08/20/92	08/20/92	08/20/92
Lab Id:	00424-09	00424-12	00424-15

Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.05 U	0.05 U	0.05 U
BETA-BHC	UG/L	0.05 U	0.05 U	0.05 U
DELTA-BHC	UG/L	0.05 U	0.05 U	0.05 U
GAMMA-BHC(LINDANE)	UG/L	0.05 U	0.05 U	0.05 U
HEPTACHLOR	UG/L	0.05 U	0.05 U	0.05 U
ALDRIN	UG/L	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	UG/L	0.05 U	0.05 U	0.05 U
ENDOSULFAN I	UG/L	0.05 U	0.05 U	0.05 U
DIELDRIN	UG/L	0.1 U	0.1 U	0.1 U
4,4'-DDE	UG/L	0.1 U	0.1 U	0.1 U
ENDRIN	UG/L	0.1 U	0.1 U	0.1 U
ENDOSULFAN II	UG/L	0.1 U	0.1 U	0.1 U
4,4'-DDD	UG/L	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	UG/L	0.1 U	0.1 U	0.1 U
4,4'-DDT	UG/L	0.1 U	0.1 U	0.1 U
METHOXYCHLOR	UG/L	0.5 U	0.5 U	0.5 U
ENDRIN KETONE	UG/L	0.1 U	0.1 U	0.1 U
ENDRIN ALDEHYDE	UG/L	0.1 U	0.1 U	0.1 U
ALPHA CHLORDANE	UG/L	0.05 U	0.05 U	0.05 U
GAMMA CHLORDANE	UG/L	0.05 U	0.05 U	0.05 U
TOXAPHENE	UG/L	5 U	5 U	5 U
PCB-1016	UG/L	1 U	1 U	1 U
PCB-1221	UG/L	2 U	2 U	2 U
PCB-1232	UG/L	1 U	1 U	1 U
PCB-1242	UG/L	1 U	1 U	1 U
PCB-1248	UG/L	1 U	1 U	1 U
PCB-1254	UG/L	1 U	1 U	1 U
PCB-1260	UG/L	1 U	1 U	1 U
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	10 U	10 U	10 U
BROMOMETHANE	UG/L	10 U	10 U	10 U
VINYL CHLORIDE	UG/L	10 U	10 U	10 U
CHLOROETHANE	UG/L	10 U	10 U	10 U
METHYLENE CHLORIDE	UG/L	10 U	10 U	10 U
ACETONE	UG/L	10 U	10 U	10 U
CARBON DISULFIDE	UG/L	10 U	10 U	10 U
1,1-DICHLOROETHENE	UG/L	10 UJ	10 UJ	10 U
1,1-DICHLOROETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHENE	UG/L	10 U	10 U	10 U
CHLOROFORM	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHANE	UG/L	10 U	10 U	10 U
2-BUTANONE	UG/L	10 U	10 U	10 U

SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	08/20/92	08/20/92	08/20/92
	Lab Id:	00424-09	00424-12	00424-15
Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
CARBON TETRACHLORIDE	UG/L	10 U	10 U	10 U
BROMODICHLOROMETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
TRICHLOROETHENE	UG/L	10 U	10 U	10 U
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	10 U
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
BENZENE	UG/L	10 U	10 U	10 U
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
BROMOFORM	UG/L	10 U	10 U	10 U
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	10 U
2-HEXANONE	UG/L	10 U	10 U	10 U
TETRACHLOROETHENE	UG/L	10 U	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	10 U
TOLUENE	UG/L	10 U	10 U	10 U
CHLOROENZENE	UG/L	10 U	10 U	10 U
ETHYLBENZENE	UG/L	10 U	10 U	10 U
STYRENE	UG/L	10 U	10 U	10 U
TOTAL XYLENES	UG/L	10 U	10 U	10 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	10 U
2-CHLOROPHENOL	UG/L	10 U	10 U	10 U
1,3-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,4-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,2-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
2-METHYLPHENOL	UG/L	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	10 U	10 U	10 U
4-METHYLPHENOL	UG/L	10 U	10 U	10 U
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	10 U
HEXACHLOROETHANE	UG/L	10 U	10 U	10 U
NITROBENZENE	UG/L	10 U	10 U	10 U
ISOPHORONE	UG/L	10 U	10 U	10 U
2-NITROPHENOL	UG/L	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	10 U
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	UG/L	10 U	10 U	10 U
NAPHTHALENE	UG/L	10 U	10 U	10 U
4-CHLORANILINE	UG/L	10 U	10 U	10 U
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	10 U

SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	08/20/92	08/20/92	08/20/92
	Lab Id:	00424-09	00424-12	00424-15
Parameter	Units			
<u>SEMIVOLATILES (Continued)</u>				
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U	10 U
2-METHYLNAPHTHALENE	UG/L	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U	10 U
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U	25 U
2-CHLORONAPHTHALENE	UG/L	10 U	10 U	10 U
2-NITROANILINE	UG/L	25 U	25 U	25 U
DIMETHYL PHTHALATE	UG/L	10 U	10 U	10 U
ACENAPHTHYLENE	UG/L	10 U	10 U	10 U
2,6-DINITROTOLUENE	UG/L	10 U	10 U	10 U
3-NITROANILINE	UG/L	25 U	25 U	25 U
ACENAPHTHENE	UG/L	10 U	10 U	10 U
2,4-DINITROPHENOL	UG/L	25 U	25 U	25 U
4-NITROPHENOL	UG/L	25 U	25 U	25 U
DIBENZOFURAN	UG/L	10 U	10 U	10 U
2,4-DINITROTOLUENE	UG/L	10 U	10 U	10 U
DIETHYL PHTHALATE	UG/L	10 U	10 U	10 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U	10 U
FLUORENE	UG/L	10 U	10 U	10 U
4-NITROANILINE	UG/L	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U	25 U
N-NITROSODIPHENYLAMINE	UG/L	10 U	10 U	10 U
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U	10 U
HEXACHLOROBENZENE	UG/L	10 U	10 U	10 U
PENTACHLOROPHENOL	UG/L	25 UJ	25 UJ	25 UJ
PHENANTHRENE	UG/L	10 U	10 U	10 U
ANTHRACENE	UG/L	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U	10 U
FLUORANTHENE	UG/L	10 U	10 U	10 U
CARBAZOLE	UG/L	10 U	10 U	10 U
PYRENE	UG/L	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U	10 U
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U	10 U
BENZO(A)ANTHRACENE	UG/L	10 U	10 U	10 U
CHRYSENE	UG/L	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE	UG/L	10 U	10 U	10 U
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U	10 U
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U	10 U
BENZO(A)PYRENE	UG/L	10 U	10 U	10 U
INDENO(1,2,3-CD) PYRENE	UG/L	10 U	10 U	10 U
DIBENZ(AH)ANTHRACENE	UG/L	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U	10 U

SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units					
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC	UG/L	0.05 U	0.05 U	ND	ND	0/3
BETA-BHC	UG/L	0.05 U	0.05 U	ND	ND	0/3
DELTA-BHC	UG/L	0.05 U	0.05 U	ND	ND	0/3
GAMMA-BHC(LINDANE)	UG/L	0.05 U	0.05 U	ND	ND	0/3
HEPTACHLOR	UG/L	0.05 U	0.05 U	ND	ND	0/3
ALDRIN	UG/L	0.05 U	0.05 U	ND	ND	0/3
HEPTACHLOR EPOXIDE	UG/L	0.05 U	0.05 U	ND	ND	0/3
ENDOSULFAN I	UG/L	0.05 U	0.05 U	ND	ND	0/3
DIELDRIN	UG/L	0.1 U	0.1 U	ND	ND	0/3
4,4'-DDE	UG/L	0.1 U	0.1 U	ND	ND	0/3
ENDRIN	UG/L	0.1 U	0.1 U	ND	ND	0/3
ENDOSULFAN II	UG/L	0.1 U	0.1 U	ND	ND	0/3
4,4'-DDD	UG/L	0.1 U	0.1 U	ND	ND	0/3
ENDOSULFAN SULFATE	UG/L	0.1 U	0.1 U	ND	ND	0/3
4,4'-DDT	UG/L	0.1 U	0.1 U	ND	ND	0/3
METHOXYCHLOR	UG/L	0.5 U	0.5 U	ND	ND	0/3
ENDRIN KETONE	UG/L	0.1 U	0.1 U	ND	ND	0/3
ENDRIN ALDEHYDE	UG/L	0.1 U	0.1 U	ND	ND	0/3
ALPHA CHLORDANE	UG/L	0.05 U	0.05 U	ND	ND	0/3
GAMMA CHLORDANE	UG/L	0.05 U	0.05 U	ND	ND	0/3
TOXAPHENE	UG/L	5 U	5 U	ND	ND	0/3
PCB-1016	UG/L	1 U	1 U	ND	ND	0/3
PCB-1221	UG/L	2 U	2 U	ND	ND	0/3
PCB-1232	UG/L	1 U	1 U	ND	ND	0/3
PCB-1242	UG/L	1 U	1 U	ND	ND	0/3
PCB-1248	UG/L	1 U	1 U	ND	ND	0/3
PCB-1254	UG/L	1 U	1 U	ND	ND	0/3
PCB-1260	UG/L	1 U	1 U	ND	ND	0/3
<u>VOLATILES</u>						
CHLOROMETHANE	UG/L	10 U	10 U	ND	ND	0/3
BROMOMETHANE	UG/L	10 U	10 U	ND	ND	0/3
VINYL CHLORIDE	UG/L	10 U	10 U	ND	ND	0/3
CHLOROETHANE	UG/L	10 U	10 U	ND	ND	0/3
METHYLENE CHLORIDE	UG/L	10 U	10 U	ND	ND	0/3
ACETONE	UG/L	10 U	10 U	ND	ND	0/3
CARBON DISULFIDE	UG/L	10 U	10 U	ND	ND	0/3
1,1-DICHLOROETHENE	UG/L	10 UJ	10 UJ	ND	ND	0/3
1,1-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND	0/3
1,2-DICHLOROETHENE	UG/L	10 U	10 U	ND	ND	0/3
CHLOROFORM	UG/L	10 U	10 U	ND	ND	0/3
1,2-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND	0/3
2-BUTANONE	UG/L	10 U	10 U	ND	ND	0/3

SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES (Continued)</u>							
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
CARBON TETRACHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
BROMODICHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	ND	ND		0/3
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
TRICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
BENZENE	UG/L	10 U	10 U	ND	ND		0/3
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
BROMOFORM	UG/L	10 U	10 U	ND	ND		0/3
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	ND	ND		0/3
2-HEXANONE	UG/L	10 U	10 U	ND	ND		0/3
TETRACHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
TOLUENE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
ETHYLBENZENE	UG/L	10 U	10 U	ND	ND		0/3
STYRENE	UG/L	10 U	10 U	ND	ND		0/3
TOTAL XYLENES	UG/L	10 U	10 U	ND	ND		0/3
<u>SEMIVOLATILES</u>							
PHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	ND	ND		0/3
2-CHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,3-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,4-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	10 U	10 U	ND	ND		0/3
4-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
NITROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
ISOPHORONE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,2,4-TRICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
NAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLORANILINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	ND	ND		0/3



SITE 69 NEW RIVER SURFACE WATER  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Units	Sample No:		Depth:		LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
		Date Sampled:	Lab Id:	NONDETECTED	MAXIMUM NONDETECTED		
<u>SEMIVOLATILES (Continued)</u>							
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLNAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U	ND	ND		0/3
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
2-CHLORONAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
DIMETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
ACENAPHTHYLENE	UG/L	10 U	10 U	ND	ND		0/3
2,6-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
3-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
ACENAPHTHENE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
4-NITROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
DIBENZOFURAN	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
DIETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
FLUORENE	UG/L	10 U	10 U	ND	ND		0/3
4-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U	ND	ND		0/3
N-NITRISODIPHENYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
PENTACHLOROPHENOL	UG/L	25 UJ	25 UJ	ND	ND		0/3
PHENANTHRENE	UG/L	10 U	10 U	ND	ND		0/3
ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
CARBAZOLE	UG/L	10 U	10 U	ND	ND		0/3
PYRENE	UG/L	10 U	10 U	ND	ND		0/3
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
CHRYSENE	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
DI-N-OCTYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)PYRENE	UG/L	10 U	10 U	ND	ND		0/3
INDENO(1,2,3-CD)PYRENE	UG/L	10 U	10 U	ND	ND		0/3
DIBENZ(A,H)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U	ND	ND		0/3

**APPENDIX O.16**  
**SITE 69 NEW RIVER SURFACE WATER INORGANICS**

SITE 69 NEW RIVER SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	08/20/92	08/20/92	08/20/92
	Lab Id:	00424-09	00424-12	00424-15
Parameter	Units			
ALUMINUM	UG/L	1840	1630	554
ANTIMONY	UG/L	14 U	14 U	14 U
ARSENIC	UG/L	3 U	3 U	3 U
BARIUM	UG/L	15.2 BJ	13.8 BJ	11.7 BJ
BERYLLIUM	UG/L	1 U	1 U	1 U
CADMIUM	UG/L	2 U	2 U	2 U
CALCIUM	UG/L	110000	110000	95700
CHROMIUM	UG/L	4 U	4 U	4 U
COBALT	UG/L	2 U	2 U	2 U
COPPER	UG/L	4.9 U	4.9 U	2 U
CYANIDE	UG/L	10 U		10 U
IRON	UG/L	1200	1330	682
LEAD	UG/L	5 U	5 U	5 U
MAGNESIUM	UG/L	308000	304000	267000
MANGANESE	UG/L	21.6 J	21.7 J	19.2 J
MERCURY	UG/L	0.2 U	0.2 U	0.2 U
NICKEL	UG/L	8 U	8 U	8 U
POTASSIUM	UG/L	111000	102000	84900
SELENIUM	UG/L	5 UJ	5 U	5 U
SILVER	UG/L	4.5 BJ	3.5 BJ	3.9 U
SODIUM	UG/L	3080000	5830000	3360000 J
THALLIUM	UG/L	10 UJ	11.3 BJ	10 UJ
VANADIUM	UG/L	2 U	2 U	2 U
ZINC	UG/L	4.7 U	7 U	4.8 U

SITE 69 NEW RIVER SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
ALUMINUM	UG/L	NA	NA	554	1840	69-NR1-SW-06	3/3
ANTIMONY	UG/L	14 U	14 U	ND	ND		0/3
ARSENIC	UG/L	3 U	3 U	ND	ND		0/3
BARIUM	UG/L	NA	NA	11.7 BJ	15.2 BJ	69-NR1-SW-06	3/3
BERYLLIUM	UG/L	1 U	1 U	ND	ND		0/3
CADMIUM	UG/L	2 U	2 U	ND	ND		0/3
CALCIUM	UG/L	NA	NA	95700	110000	69-NR2-SW-06	3/3
CHROMIUM	UG/L	4 U	4 U	ND	ND		0/3
COBALT	UG/L	2 U	2 U	ND	ND		0/3
COPPER	UG/L	2 U	4.9 U	ND	ND		0/3
CYANIDE	UG/L	10 U	10 U	ND	ND		0/2
IRON	UG/L	NA	NA	682	1330	69-NR2-SW-06	3/3
LEAD	UG/L	5 U	5 U	ND	ND		0/3
MAGNESIUM	UG/L	NA	NA	267000	308000	69-NR1-SW-06	3/3
MANGANESE	UG/L	NA	NA	19.2 J	21.7 J	69-NR2-SW-06	3/3
MERCURY	UG/L	0.2 U	0.2 U	ND	ND		0/3
NICKEL	UG/L	8 U	8 U	ND	ND		0/3
POTASSIUM	UG/L	NA	NA	84900	111000	69-NR1-SW-06	3/3
SELENIUM	UG/L	5 UJ	5 UJ	ND	ND		0/3
SILVER	UG/L	3.9 U	3.9 U	3.5 BJ	4.5 BJ	69-NR1-SW-06	2/3
SODIUM	UG/L	NA	NA	3080000	5830000	69-NR2-SW-06	3/3
THALLIUM	UG/L	10 UJ	10 UJ	11.3 BJ	11.3 BJ	69-NR2-SW-06	1/3
VANADIUM	UG/L	2 U	2 U	ND	ND		0/3
ZINC	UG/L	4.7 U	7 U	ND	ND		0/3

**APPENDIX O.17**  
**SITE 69 UNNAMED TRIBUTARY SURFACE WATER ORGANICS**

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08

Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
BETA-BHC	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
DELTA-BHC	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
GAMMA-BHC(LINDANE)	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
HEPTACHLOR	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
ALDRIN	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
HEPTACHLOR EPOXIDE	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
ENDOSULFAN I	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
DIELDRIN	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
4,4'-DDE	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
ENDRIN	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
ENDOSULFAN II	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
4,4'-DDD	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
ENDOSULFAN SULFATE	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
4,4'-DDT	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
METHOXYCHLOR	UG/L	0.5 UJ	0.84 UJ	0.84 UJ
ENDRIN KETONE	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
ENDRIN ALDEHYDE	UG/L	0.1 UJ	0.17 UJ	0.17 UJ
ALPHA CHLORDANE	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
GAMMA CHLORDANE	UG/L	0.05 UJ	0.084 UJ	0.084 UJ
TOXAPHENE	UG/L	5 UJ	8.4 UJ	8.4 UJ
PCB-1016	UG/L	1 UJ	1.7 UJ	1.7 UJ
PCB-1221	UG/L	2 UJ	3.3 UJ	3.3 UJ
PCB-1232	UG/L	1 UJ	1.7 UJ	1.7 UJ
PCB-1242	UG/L	1 UJ	1.7 UJ	1.7 UJ
PCB-1248	UG/L	1 UJ	1.7 UJ	1.7 UJ
PCB-1254	UG/L	1 UJ	1.7 UJ	1.7 UJ
PCB-1260	UG/L	1 UJ	1.7 UJ	1.7 UJ
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	10 U	10 U	10 U
BROMOMETHANE	UG/L	10 U	10 U	10 U
VINYL CHLORIDE	UG/L	10 U	10 U	10 U
CHLOROETHANE	UG/L	10 U	10 U	10 U
METHYLENE CHLORIDE	UG/L	10 U	10 U	10 U
ACETONE	UG/L	10 U	10 U	10 U
CARBON DISULFIDE	UG/L	10 U	10 U	10 U
1,1-DICHLOROETHENE	UG/L	10 U	10 UJ	10 UJ
1,1-DICHLOROETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHENE	UG/L	10 U	10 U	10 U
CHLOROFORM	UG/L	10 U	10 U	10 U
1,2-DICHLOROETHANE	UG/L	10 U	10 U	10 U
2-BUTANONE	UG/L	10 U	10 U	10 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08

Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
CARBON TETRACHLORIDE	UG/L	10 U	10 U	10 U
BROMODICHLOROMETHANE	UG/L	10 U	10 U	10 U
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
TRICHLOROETHENE	UG/L	10 U	10 U	10 U
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	10 U
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	10 U
BENZENE	UG/L	10 U	10 U	10 U
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	10 U
BROMOFORM	UG/L	10 U	10 U	10 U
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	10 U
2-HEXANONE	UG/L	10 U	10 U	10 U
TETRACHLOROETHENE	UG/L	10 U	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	10 U
TOLUENE	UG/L	10 U	10 U	10 U
CHLOROENZENE	UG/L	10 U	10 U	10 U
ETHYLBENZENE	UG/L	10 U	10 U	10 U
STYRENE	UG/L	10 U	10 U	10 U
TOTAL XYLENES	UG/L	10 U	10 U	10 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	10 U
2-CHLOROPHENOL	UG/L	10 U	10 U	10 U
1,3-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,4-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
1,2-DICHLOROBENZENE	UG/L	10 U	10 U	10 U
2-METHYLPHENOL	UG/L	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	10 U	10 U	10 U
4-METHYLPHENOL	UG/L	10 U	10 U	10 U
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	10 U
HEXACHLOROETHANE	UG/L	10 U	10 U	10 U
NITROBENZENE	UG/L	10 U	10 U	10 U
ISOPHORONE	UG/L	10 U	10 U	10 U
2-NITROPHENOL	UG/L	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	10 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	10 U
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	UG/L	10 U	10 U	10 U
NAPHTHALENE	UG/L	10 U	10 U	10 U
4-CHLORANILINE	UG/L	10 U	10 U	10 U
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	10 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08
Parameter	Units		
<u>SEMIVOLATILES (Continued)</u>			
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U
2-METHYLNAPHTHALENE	UG/L	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U
2-CHLORONAPHTHALENE	UG/L	10 U	10 U
2-NITROANILINE	UG/L	25 U	25 U
DIMETHYL PHTHALATE	UG/L	10 U	10 U
ACENAPHTHYLENE	UG/L	10 U	10 U
2,6-DINITROTOLUENE	UG/L	10 U	10 U
3-NITROANILINE	UG/L	25 U	25 U
ACENAPHTHENE	UG/L	10 U	10 U
2,4-DINITROPHENOL	UG/L	25 U	25 U
4-NITROPHENOL	UG/L	25 U	25 U
DIBENZOFURAN	UG/L	10 U	10 U
2,4-DINITROTOLUENE	UG/L	10 U	10 U
DIETHYL PHTHALATE	UG/L	10 U	10 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U
FLUORENE	UG/L	10 U	10 U
4-NITROANILINE	UG/L	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U
N-NITRISODIPHENYLAMINE	UG/L	10 U	10 U
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U
HEXACHLOROBENZENE	UG/L	10 U	10 U
PENTACHLOROPHENOL	UG/L	25 UJ	25 UJ
PHENANTHRENE	UG/L	10 U	10 U
ANTHRACENE	UG/L	10 U	10 U
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U
FLUORANTHENE	UG/L	10 UJ	10 U
CARBAZOLE	UG/L	10 U	10 U
PYRENE	UG/L	10 UJ	10 U
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U
BENZO(A)ANTHRACENE	UG/L	10 U	10 U
CHRYSENE	UG/L	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 U	10 U
DI-N-OCTYL PHTHALATE	UG/L	10 U	10 U
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U
BENZO(A)PYRENE	UG/L	10 U	10 U
INDENO(1,2,3-CD) PYRENE	UG/L	10 U	10 U
DIBENZ(A,H)ANTHRACENE	UG/L	10 U	10 U
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U



SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO - 0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>PESTICIDE/PCBs</u>							
ALPHA-BHC	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
BETA-BHC	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
DELTA-BHC	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
GAMMA-BHC(LINDANE)	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
HEPTACHLOR	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
ALDRIN	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
HEPTACHLOR EPOXIDE	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
ENDOSULFAN I	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
DIELDRIN	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
4,4'-DDE	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
ENDRIN	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
ENDOSULFAN II	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
4,4'-DDD	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
ENDOSULFAN SULFATE	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
4,4'-DDT	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
METHOXYCHLOR	UG/L	0.5 UJ	0.84 UJ	ND	ND		0/3
ENDRIN KETONE	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
ENDRIN ALDEHYDE	UG/L	0.1 UJ	0.17 UJ	ND	ND		0/3
ALPHA CHLORDANE	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
GAMMA CHLORDANE	UG/L	0.05 UJ	0.084 UJ	ND	ND		0/3
TOXAPHENE	UG/L	5 UJ	8.4 UJ	ND	ND		0/3
PCB-1016	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
PCB-1221	UG/L	2 UJ	3.3 UJ	ND	ND		0/3
PCB-1232	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
PCB-1242	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
PCB-1248	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
PCB-1254	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
PCB-1260	UG/L	1 UJ	1.7 UJ	ND	ND		0/3
<u>VOLATILES</u>							
CHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
BROMOMETHANE	UG/L	10 U	10 U	ND	ND		0/3
VINYL CHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
METHYLENE CHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
ACETONE	UG/L	10 U	10 U	ND	ND		0/3
CARBON DISULFIDE	UG/L	10 U	10 U	ND	ND		0/3
1,1-DICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
1,1-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROFORM	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
2-BUTANONE	UG/L	10 U	10 U	ND	ND		0/3

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES (Continued)</u>							
1,1,1-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
CARBON TETRACHLORIDE	UG/L	10 U	10 U	ND	ND		0/3
BROMODICHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROPROPANE	UG/L	10 U	10 U	ND	ND		0/3
CIS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
TRICHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
DIBROMOCHLOROMETHANE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2-TRICHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
BENZENE	UG/L	10 U	10 U	ND	ND		0/3
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U	10 U	ND	ND		0/3
BROMOFORM	UG/L	10 U	10 U	ND	ND		0/3
4-METHYL-2-PENTANONE	UG/L	10 U	10 U	ND	ND		0/3
2-HEXANONE	UG/L	10 U	10 U	ND	ND		0/3
TETRACHLOROETHENE	UG/L	10 U	10 U	ND	ND		0/3
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
TOLUENE	UG/L	10 U	10 U	ND	ND		0/3
CHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
ETHYLBENZENE	UG/L	10 U	10 U	ND	ND		0/3
STYRENE	UG/L	10 U	10 U	ND	ND		0/3
TOTAL XYLENES	UG/L	10 U	10 U	ND	ND		0/3
<u>SEMIVOLATILES</u>							
PHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHYL) ETHER	UG/L	10 U	10 U	ND	ND		0/3
2-CHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,3-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,4-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
1,2-DICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	10 U	10 U	ND	ND		0/3
4-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
N-NITROSODI-N-PROPYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROETHANE	UG/L	10 U	10 U	ND	ND		0/3
NITROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
ISOPHORONE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4-DIMETHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-CHLOROETHOXY) METHANE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
1,2,4-TRICHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
NAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLORANILINE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBUTADIENE	UG/L	10 U	10 U	ND	ND		0/3

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>SEMIVOLATILES (Continued)</u>							
4-CHLORO-3-METHYLPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2-METHYLNAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROCYCLOPENTADIENE	UG/L	10 U	10 U	ND	ND		0/3
2,4,6-TRICHLOROPHENOL	UG/L	10 U	10 U	ND	ND		0/3
2,4,5-TRICHLOROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
2-CHLORONAPHTHALENE	UG/L	10 U	10 U	ND	ND		0/3
2-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
DIMETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
ACENAPHTHYLENE	UG/L	10 U	10 U	ND	ND		0/3
2,6-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
3-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
ACENAPHTHENE	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
4-NITROPHENOL	UG/L	25 U	25 U	ND	ND		0/3
DIBENZOFURAN	UG/L	10 U	10 U	ND	ND		0/3
2,4-DINITROTOLUENE	UG/L	10 U	10 U	ND	ND		0/3
DIETHYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
4-CHLOROPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
FLUORENE	UG/L	10 U	10 U	ND	ND		0/3
4-NITROANILINE	UG/L	25 U	25 U	ND	ND		0/3
4,6-DINITRO-2-METHYLPHENOL	UG/L	25 U	25 U	ND	ND		0/3
N-NITRISODIPHENYLAMINE	UG/L	10 U	10 U	ND	ND		0/3
4-BROMOPHENYL PHENYL ETHER	UG/L	10 U	10 U	ND	ND		0/3
HEXACHLOROBENZENE	UG/L	10 U	10 U	ND	ND		0/3
PENTACHLOROPHENOL	UG/L	25 UJ	25 UJ	ND	ND		0/3
PHENANTHRENE	UG/L	10 U	10 U	ND	ND		0/3
ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
DI-N-BUTYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
FLUORANTHENE	UG/L	10 UJ	10 UJ	ND	ND		0/3
CARBAZOLE	UG/L	10 U	10 U	ND	ND		0/3
PYRENE	UG/L	10 UJ	10 UJ	ND	ND		0/3
BUTYL BENZYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
3,3-DICHLOROBENZIDINE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
CHRYSENE	UG/L	10 U	10 U	ND	ND		0/3
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
DI-N-OCTYL PHTHALATE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(B)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(K)FLUORANTHENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(A)PYRENE	UG/L	10 U	10 U	ND	ND		0/3
INDENO(1,2,3-CD) PYRENE	UG/L	10 U	10 U	ND	ND		0/3
DIBENZ(AH)ANTHRACENE	UG/L	10 U	10 U	ND	ND		0/3
BENZO(G,H,I)PERYLENE	UG/L	10 U	10 U	ND	ND		0/3

**APPENDIX O.18**  
**SITE 69 UNNAMED TRIBUTARY**  
**SURFACE WATER INORGANICS**

---

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/21/92	8/21/92	8/21/92
Lab Id:	00428-02	00425-04	00425-08

Parameter	Units			
ALUMINUM	UG/L	1110	881	3490
ANTIMONY	UG/L	49 U	14 UJ	14 UJ
ARSENIC	UG/L	3 U	3 U	3 U
BARIUM	UG/L	23 B	15.2 JB	18 JB
BERYLLIUM	UG/L	1 U	1 U	1 U
CADMIUM	UG/L	3 JB	2 U	2 U
CALCIUM	UG/L	1380 B	16900	92300
CHROMIUM	UG/L	5 U	4 U	4 U
COBALT	UG/L	8 JB	2 U	2 U
COPPER	UG/L	7 JB	3.9 UJ	2.5 UJ
CYANIDE	UG/L	10 U	10 U	10 U
IRON	UG/L	1000	740	1840
LEAD	UG/L	2 B	1.2 U	1 UJ
MAGNESIUM	UG/L	846 B	37300	257000
MANGANESE	UG/L	9 JB	17.7 J	16.1 J
MERCURY	UG/L	0.2 U	0.2 U	0.2 U
NICKEL	UG/L	17 U	8 U	8 U
POTASSIUM	UG/L	385 B	12900	86000
SELENIUM	UG/L	5 U	5 U	5 UJ
SILVER	UG/L	10 U	3.3 U	3.7 U
SODIUM	UG/L	4790 JB	296000	2220000
THALLIUM	UG/L	2 UJ	2 UJ	2 UJ
VANADIUM	UG/L	10 JB	2 U	4.2 JB
ZINC	UG/L	18 B	8.8 U	5.8 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
ALUMINUM	UG/L	NA	NA	881	3490	69-UT3-SW-06	3/3
ANTIMONY	UG/L	14 UJ	49 U	ND	ND		0/3
ARSENIC	UG/L	3 U	3 U	ND	ND		0/3
BARIUM	UG/L	NA	NA	15.2 JB	23 B	69-UT1-SW-06	3/3
BERYLLIUM	UG/L	1 U	1 U	ND	ND		0/3
CADMIUM	UG/L	2 U	2 U	3 JB	3 JB	69-UT1-SW-06	1/3
CALCIUM	UG/L	NA	NA	1380 B	92300	69-UT3-SW-06	3/3
CHROMIUM	UG/L	4 U	5 U	ND	ND		0/3
COBALT	UG/L	2 U	2 U	8 JB	8 JB	69-UT1-SW-06	1/3
COPPER	UG/L	2.5 UJ	3.9 UJ	7 JB	7 JB	69-UT1-SW-06	1/3
CYANIDE	UG/L	10 U	10 U	ND	ND		0/3
IRON	UG/L	NA	NA	740	1840	69-UT3-SW-06	3/3
LEAD	UG/L	1 UJ	1.2 U	2 B	2 B	69-UT1-SW-06	1/3
MAGNESIUM	UG/L	NA	NA	846 B	257000	69-UT3-SW-06	3/3
MANGANESE	UG/L	NA	NA	9 JB	17.7 J	69-UT2-SW-06	3/3
MERCURY	UG/L	0.2 U	0.2 U	ND	ND		0/3
NICKEL	UG/L	8 U	17 U	ND	ND		0/3
POTASSIUM	UG/L	NA	NA	385 B	86000	69-UT3-SW-06	3/3
SELENIUM	UG/L	5 U	5 U	ND	ND		0/3
SILVER	UG/L	3.3 U	10 U	ND	ND		0/3
SODIUM	UG/L	NA	NA	4790 JB	2220000	69-UT3-SW-06	3/3
THALLIUM	UG/L	2 UJ	2 UJ	ND	ND		0/3
VANADIUM	UG/L	2 U	2 U	4.2 JB	10 JB	69-UT1-SW-06	2/3
ZINC	UG/L	5.8 U	8.8 U	18 B	18 B	69-UT1-SW-06	1/3

**APPENDIX O.19**  
**SITE 69 ON-SITE AND DRAINAGE AREA SEDIMENT ORGANICS**

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
<b>SEMIVOLATILES</b>							
1,2-Dichlorobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
1,2,4-Trichlorobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
1,3-Dichlorobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
1,4-Dichlorobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2-Chloronaphthalene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2-Chlorophenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2-Methylnaphthalene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2-Methylphenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2-Nitroaniline	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
2-Nitrophenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,2'-oxybis-(1-chloropropane)	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,4-Dichlorophenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,4-Dimethylphenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,4-Dinitrophenol	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
2,4-Dinitrotoluene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,4,5-Trichlorophenol	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
2,4,6-Trichlorophenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
2,6-Dinitrotoluene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
3-Nitroaniline	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
3,3'-Dichlorobenzidine	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Bromophenyl-phenylether	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Chloro-3-methylphenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Chloroaniline	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Chlorophenyl phenyl ether	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Methylphenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
4-Nitroaniline	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
4-Nitrophenol	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
4,6-Dinitro-2-methylphenol	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
Acenaphthene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Acenaphthylene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Anthracene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Benzo[a]anthracene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Benzo[a]pyrene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Benzo[g,h,i]perylene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Benzo[k]fluoranthene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
bis(2-Chloroethoxy) methane	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
bis(2-Chloroethyl) ether	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Butyl benzyl phthalate	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Carbazole	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Chrysene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Dibenzofuran	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Dibenz[a,h]anthracene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Diethylphthalate	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Dimethyl phthalate	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
di-n-Butylphthalate	UG/KG	4300.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	110.0 J
di-n-Octylphthalate	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Fluoranthene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Fluorene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Hexachlorobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Hexachlorobutadiene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Hexachlorocyclopentadiene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Hexachloroethane	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Indeno[1,2,3-cd]pyrene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Isophorone	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Naphthalene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Nitrobenzene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
N-Nitroso-di-n-propylamine	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
N-nitrosodiphenylamine	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Pentachlorophenol	UG/KG	10000.0 U	2670.0 U	1480.0 U	6160.0 U	8340 U	1350.0 U
Phenanthrene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Phenol	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Pyrene	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
<u>VOLATILES</u>							
Chloromethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Bromomethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Vinyl chloride	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Chloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Methylene chloride	UG/KG	36.0 J	8.00 J	9.00 J	48.0	8 J	17.0 U
Acetone	UG/KG	220.0 U	33.0 U	18.00 U	150.0 U	9 J	850.0 J
Carbon Disulfide	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,1-Dichloroethene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,1-Dichloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,2-Dichloroethene(total)	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	9 J	16.7 U
Chloroform	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,2-Dichloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
2-Butanone	UG/KG	36.0 J	33.3 U	18.5 U	76.9 U	21 U	16.7 UJ
1,1,1-Trichloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Carbon tetrachloride	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Bromodichloromethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,2-Dichloropropane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
cis-1,3-Dichloropropene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Trichloroethene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Dibromochloromethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,1,2-Trichloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Benzene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
trans-1,3-Dichloropropene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Bromoform	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
4-Methyl-2-pentanone	UG/KG	14.0 J	33.3 U	18.5 U	76.9 U	21 U	17.0
2-Hexanone	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Tetrachloroethene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
1,1,2,2-Tetrachloroethane	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Toluene	UG/KG	125.0 U	33.3 U	18.5 U	18.0 J	21 U	16.7 U
Chlorobenzene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Ethylbenzene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Styrene	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U
Xylenes (total)	UG/KG	125.0 U	33.3 U	18.5 U	76.9 U	21 U	16.7 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/KG	21.2 UJ	5.66 UJ	3.23 UJ	7.38 UJ	3.10 J
beta-BHC	UG/KG	21.2 UJ	5.66 UJ	3.23 UJ	7.38 UJ	23.4 J
delta-BHC	UG/KG	21.2 UJ	5.66 UJ	3.23 UJ	7.38 UJ	54.5 J
Lindane (gamma-BHC)	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Heptachlor	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Aldrin	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Heptachlor epoxide	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Endosulfan I	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Dieldrin	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
4,4'-DDE	UG/KG	41.2 UJ	13.3 J	6.27 U	14.3 UJ	5.50 UJ
Endrin	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
Endosulfan II	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
4,4'-DDD	UG/KG	41.2 UJ	4.90 J	1.50 J	13.9 J	5.50 UJ
Endosulfan sulfate	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
4,4'-DDT	UG/KG	41.2 UJ	11.0 U	6.27 U	6.60 J	2.10 J
Methoxychlor	UG/KG	212.0 UJ	56.6 UJ	32.3 UJ	73.8 UJ	28.3 UJ
Endrin ketone	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
Endrin aldehyde	UG/KG	41.2 UJ	11.0 U	6.27 U	14.3 UJ	5.50 UJ
alpha-Chlordane	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
gamma-Chlordane	UG/KG	21.2 UJ	5.66 U	3.23 U	7.38 UJ	2.83 UJ
Toxaphene	UG/KG	2120.0 UJ	566.0 U	323.0 U	738.0 UJ	283.0 UJ
Aroclor 1016	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ
Aroclor 1221	UG/KG	838.0 UJ	223.0 U	127.0 U	291.0 UJ	112.0 UJ
Aroclor 1232	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ
Aroclor 1242	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ
Aroclor 1248	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ
Aroclor 1254	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ
Aroclor 1260	UG/KG	412.0 UJ	110.0 U	62.7 U	143.0 UJ	55.0 UJ

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	960.0 J	1100.0 U	610.0 U	2540.0 U	3440 U	60.0 J
Chloroacetophenone	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
Hydroxyacetophenone	UG/KG	20600.0 U	5500.0 U	3050.0 U	12700.0 U	17200 U	2790.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	20600.0 U	5500.0 U	3050.0 U	12700.0 U	17200 U	2790.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	20600.0 U	5500.0 U	3050.0 U	12700.0 U	17200 U	2790.0 U
1,4-Dithiane	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
1,4-Oxathiane	UG/KG	4120.0 U	1100.0 U	610.0 U	2540.0 U	3440 U	558.0 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	81.2 U	20.9 U	11.6 U	48.1 U	12.9 U	10.5 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-0S-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

SEMIVOLATILES

1,2-Dichlorobenzene	UG/KG	403.0 U
1,2,4-Trichlorobenzene	UG/KG	403.0 U
1,3-Dichlorobenzene	UG/KG	403.0 U
1,4-Dichlorobenzene	UG/KG	403.0 U
2-Chloronaphthalene	UG/KG	403.0 U
2-Chlorophenol	UG/KG	403.0 U
2-Methylnaphthalene	UG/KG	403.0 U
2-Methylphenol	UG/KG	403.0 U
2-Nitroaniline	UG/KG	976.0 U
2-Nitrophenol	UG/KG	403.0 U
2,2'-oxybis-(1-chloropropane)	UG/KG	403.0 U
2,4-Dichlorophenol	UG/KG	403.0 U
2,4-Dimethylphenol	UG/KG	403.0 U
2,4-Dinitrophenol	UG/KG	976.0 U
2,4-Dinitrotoluene	UG/KG	403.0 U
2,4,5-Trichlorophenol	UG/KG	976.0 U
2,4,6-Trichlorophenol	UG/KG	403.0 U
2,6-Dinitrotoluene	UG/KG	403.0 U
3-Nitroaniline	UG/KG	976.0 U
3,3'-Dichlorobenzidine	UG/KG	403.0 U
4-Bromophenyl-phenylether	UG/KG	403.0 U
4-Chloro-3-methylphenol	UG/KG	403.0 U
4-Chloroaniline	UG/KG	403.0 U
4-Chlorophenyl phenyl ether	UG/KG	403.0 U
4-Methylphenol	UG/KG	403.0 U
4-Nitroaniline	UG/KG	976.0 U
4-Nitrophenol	UG/KG	976.0 U
4,6-Dinitro-2-methylphenol	UG/KG	976.0 U
Acenaphthene	UG/KG	403.0 U
Acenaphthylene	UG/KG	403.0 U
Anthracene	UG/KG	403.0 U
Benzo[a]anthracene	UG/KG	403.0 U
Benzo[a]pyrene	UG/KG	403.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-OS-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	403.0 U
Benzo[g,h,i]perylene	UG/KG	403.0 U
Benzo[k]fluoranthene	UG/KG	403.0 U
bis(2-Chloroethoxy) methane	UG/KG	403.0 U
bis(2-Chloroethyl) ether	UG/KG	403.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	403.0 U
Butyl benzyl phthalate	UG/KG	403.0 U
Carbazole	UG/KG	403.0 U
Chrysene	UG/KG	403.0 U
Dibenzofuran	UG/KG	403.0 U
Dibenz[a,h]anthracene	UG/KG	403.0 U
Diethylphthalate	UG/KG	403.0 U
Dimethyl phthalate	UG/KG	403.0 U
di-n-Butylphthalate	UG/KG	110.0 J
di-n-Octylphthalate	UG/KG	403.0 U
Fluoranthene	UG/KG	403.0 U
Fluorene	UG/KG	403.0 U
Hexachlorobenzene	UG/KG	403.0 U
Hexachlorobutadiene	UG/KG	403.0 U
Hexachlorocyclopentadiene	UG/KG	403.0 U
Hexachloroethane	UG/KG	403.0 U
Indeno[1,2,3-cd]pyrene	UG/KG	403.0 U
Isophorone	UG/KG	403.0 U
Naphthalene	UG/KG	403.0 U
Nitrobenzene	UG/KG	403.0 U
N-Nitroso-di-n-propylamine	UG/KG	403.0 U
N-nitrosodiphenylamine	UG/KG	403.0 U
Pentachlorophenol	UG/KG	976.0 U
Phenanthrene	UG/KG	403.0 U
Phenol	UG/KG	403.0 U
Pyrene	UG/KG	403.0 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-0S-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94

Percent Solids 82.4

VOLATILES

Chloromethane	UG/KG	12.2 U
Bromomethane	UG/KG	12.2 U
Vinyl chloride	UG/KG	12.2 U
Chloroethane	UG/KG	12.2 U
Methylene chloride	UG/KG	12.00 U
Acetone	UG/KG	170.0 J
Carbon Disulfide	UG/KG	12.2 U
1,1-Dichloroethene	UG/KG	12.2 U
1,1-Dichloroethane	UG/KG	12.2 U
1,2-Dichloroethene(total)	UG/KG	12.2 U
Chloroform	UG/KG	12.2 U
1,2-Dichloroethane	UG/KG	12.2 U
2-Butanone	UG/KG	12.2 UJ
1,1,1-Trichloroethane	UG/KG	12.2 U
Carbon tetrachloride	UG/KG	12.2 U
Bromodichloromethane	UG/KG	12.2 U
1,2-Dichloropropane	UG/KG	12.2 U
cis-1,3-Dichloropropene	UG/KG	12.2 U
Trichloroethene	UG/KG	12.2 U
Dibromochloromethane	UG/KG	12.2 U
1,1,2-Trichloroethane	UG/KG	12.2 U
Benzene	UG/KG	12.2 U
trans-1,3-Dichloropropene	UG/KG	12.2 U
Bromoform	UG/KG	12.2 U
4-Methyl-2-pentanone	UG/KG	9.00 J
2-Hexanone	UG/KG	12.2 U
Tetrachloroethene	UG/KG	12.2 U
1,1,2,2-Tetrachloroethane	UG/KG	12.2 U
Toluene	UG/KG	12.2 U
Chlorobenzene	UG/KG	12.2 U
Ethylbenzene	UG/KG	12.2 U
Styrene	UG/KG	12.2 U
Xylenes (total)	UG/KG	12.2 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-OS-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

<u>PESTICIDE/PCBS</u>		
alpha-BHC	UG/KG	2.07 UJ
beta-BHC	UG/KG	2.07 UJ
delta-BHC	UG/KG	2.07 UJ
Lindane (gamma-BHC)	UG/KG	2.07 UJ
Heptachlor	UG/KG	2.07 UJ
Aldrin	UG/KG	2.07 UJ
Heptachlor epoxide	UG/KG	2.07 UJ
Endosulfan I	UG/KG	2.07 UJ
Dieldrin	UG/KG	4.02 UJ
4,4'-DDE	UG/KG	4.02 UJ
Endrin	UG/KG	4.02 UJ
Endosulfan II	UG/KG	4.02 UJ
4,4'-DDD	UG/KG	4.02 UJ
Endosulfan sulfate	UG/KG	4.02 UJ
4,4'-DDT	UG/KG	4.02 UJ
Methoxychlor	UG/KG	20.7 UJ
Endrin ketone	UG/KG	4.02 UJ
Endrin aldehyde	UG/KG	4.02 UJ
alpha-Chlordane	UG/KG	2.07 UJ
gamma-Chlordane	UG/KG	2.07 UJ
Toxaphene	UG/KG	207.0 UJ
Aroclor 1016	UG/KG	40.2 UJ
Aroclor 1221	UG/KG	81.7 UJ
Aroclor 1232	UG/KG	40.2 UJ
Aroclor 1242	UG/KG	40.2 UJ
Aroclor 1248	UG/KG	40.2 UJ
Aroclor 1254	UG/KG	40.2 UJ
Aroclor 1260	UG/KG	40.2 UJ



FREQUENCY OF DETECTION SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SEDIMENT  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
ORGANICS

Client Sample ID: 69-OS-SD03-06  
Laboratory Sample ID: 9401041-11A  
Date Sampled: 01/07/94  
Percent Solids 82.4

---

CHEMICAL SURETY

Acetophenone	UG/KG	403.0 U
Chloroacetophenone	UG/KG	403.0 U
Hydroxyacetophenone	UG/KG	2010.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	2010.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	2010.0 U
1,4-Dithiane	UG/KG	403.0 U
1,4-Oxathiane	UG/KG	403.0 U

THIODIGLYCOL

Thiodiglycol	MG/KG	7.56 U
--------------	-------	--------

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>SEMIVOLATILES</b>							
1,2-Dichlorobenzene	UG/KG	403 U	4120 U	ND	ND		0/7
1,2,4-Trichlorobenzene	UG/KG	403 U	4120 U	ND	ND		0/7
1,3-Dichlorobenzene	UG/KG	403 U	4120 U	ND	ND		0/7
1,4-Dichlorobenzene	UG/KG	403 U	4120 U	ND	ND		0/7
2-Chloronaphthalene	UG/KG	403 U	4120 U	ND	ND		0/7
2-Chlorophenol	UG/KG	403 U	4120 U	ND	ND		0/7
2-Methylnaphthalene	UG/KG	403 U	4120 U	ND	ND		0/7
2-Methylphenol	UG/KG	403 U	4120 U	ND	ND		0/7
2-Nitroaniline	UG/KG	976 U	10000 U	ND	ND		0/7
2-Nitrophenol	UG/KG	403 U	4120 U	ND	ND		0/7
2,2'-oxybis-(1-chloropropane)	UG/KG	403 U	4120 U	ND	ND		0/7
2,4-Dichlorophenol	UG/KG	403 U	4120 U	ND	ND		0/7
2,4-Dimethylphenol	UG/KG	403 U	4120 U	ND	ND		0/7
2,4-Dinitrophenol	UG/KG	976 U	10000 U	ND	ND		0/7
2,4-Dinitrotoluene	UG/KG	403 U	4120 U	ND	ND		0/7
2,4,5-Trichlorophenol	UG/KG	976 U	10000 U	ND	ND		0/7
2,4,6-Trichlorophenol	UG/KG	403 U	4120 U	ND	ND		0/7
2,6-Dinitrotoluene	UG/KG	403 U	4120 U	ND	ND		0/7
3-Nitroaniline	UG/KG	976 U	10000 U	ND	ND		0/7
3,3'-Dichlorobenzidine	UG/KG	403 U	4120 U	ND	ND		0/7
4-Bromophenyl-phenylether	UG/KG	403 U	4120 U	ND	ND		0/7
4-Chloro-3-methylphenol	UG/KG	403 U	4120 U	ND	ND		0/7
4-Chloroaniline	UG/KG	403 U	4120 U	ND	ND		0/7
4-Chlorophenyl phenyl ether	UG/KG	403 U	4120 U	ND	ND		0/7
4-Methylphenol	UG/KG	403 U	4120 U	ND	ND		0/7
4-Nitroaniline	UG/KG	976 U	10000 U	ND	ND		0/7
4-Nitrophenol	UG/KG	976 U	10000 U	ND	ND		0/7
4,6-Dinitro-2-methylphenol	UG/KG	976 U	10000 U	ND	ND		0/7
Acenaphthene	UG/KG	403 U	4120 U	ND	ND		0/7
Acenaphthylene	UG/KG	403 U	4120 U	ND	ND		0/7
Anthracene	UG/KG	403 U	4120 U	ND	ND		0/7
Benzo[a]anthracene	UG/KG	403 U	4120 U	ND	ND		0/7
Benzo[a]pyrene	UG/KG	403 U	4120 U	ND	ND		0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/KG	403 U	4120 U	ND	ND	0/7
Benzo[g,h,i]perylene	UG/KG	403 U	4120 U	ND	ND	0/7
Benzo[k]fluoranthene	UG/KG	403 U	4120 U	ND	ND	0/7
bis(2-Chloroethoxy) methane	UG/KG	403 U	4120 U	ND	ND	0/7
bis(2-Chloroethyl) ether	UG/KG	403 U	4120 U	ND	ND	0/7
bis(2-Ethylhexyl)phthalate	UG/KG	403 U	4120 U	ND	ND	0/7
Butyl benzyl phthalate	UG/KG	403 U	4120 U	ND	ND	0/7
Carbazole	UG/KG	403 U	4120 U	ND	ND	0/7
Chrysene	UG/KG	403 U	4120 U	ND	ND	0/7
Dibenzofuran	UG/KG	403 U	4120 U	ND	ND	0/7
Dibenz[a,h]anthracene	UG/KG	403 U	4120 U	ND	ND	0/7
Diethylphthalate	UG/KG	403 U	4120 U	ND	ND	0/7
Dimethyl phthalate	UG/KG	403 U	4120 U	ND	ND	0/7
di-n-Butylphthalate	UG/KG	610 U	4300 U	110 J	110 J	69-0S-SD03-06 2/7
di-n-Octylphthalate	UG/KG	403 U	4120 U	ND	ND	0/7
Fluoranthene	UG/KG	403 U	4120 U	ND	ND	0/7
Fluorene	UG/KG	403 U	4120 U	ND	ND	0/7
Hexachlorobenzene	UG/KG	403 U	4120 U	ND	ND	0/7
Hexachlorobutadiene	UG/KG	403 U	4120 U	ND	ND	0/7
Hexachlorocyclopentadiene	UG/KG	403 U	4120 U	ND	ND	0/7
Hexachloroethane	UG/KG	403 U	4120 U	ND	ND	0/7
Indeno[1,2,3-cd]pyrene	UG/KG	403 U	4120 U	ND	ND	0/7
Isophorone	UG/KG	403 U	4120 U	ND	ND	0/7
Naphthalene	UG/KG	403 U	4120 U	ND	ND	0/7
Nitrobenzene	UG/KG	403 U	4120 U	ND	ND	0/7
N-Nitroso-di-n-propylamine	UG/KG	403 U	4120 U	ND	ND	0/7
N-nitrosodiphenylamine	UG/KG	403 U	4120 U	ND	ND	0/7
Pentachlorophenol	UG/KG	976 U	10000 U	ND	ND	0/7
Phenanthrene	UG/KG	403 U	4120 U	ND	ND	0/7
Phenol	UG/KG	403 U	4120 U	ND	ND	0/7
Pyrene	UG/KG	403 U	4120 U	ND	ND	0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>VOLATILES</u>							
Chloromethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Bromomethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Vinyl chloride	UG/KG	12.2 U	125 U	ND	ND		0/7
Chloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Methylene chloride	UG/KG	12 U	17 U	8 J	48	69-DA-SD04-06	5/7
Acetone	UG/KG	18 U	220 U	9 J	850 J	69-OS-SD02-06	3/7
Carbon Disulfide	UG/KG	12.2 U	125 U	ND	ND		0/7
1,1-Dichloroethene	UG/KG	12.2 U	125 U	ND	ND		0/7
1,1-Dichloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
1,2-Dichloroethene(total)	UG/KG	12.2 U	125 U	ND	9 J	69-OS-SD01-06	1/7
Chloroform	UG/KG	12.2 U	125 U	ND	ND		0/7
1,2-Dichloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
2-Butanone	UG/KG	12.2 U	76.9 U	36 J	36 J	69-DA-SD01-06	1/7
1,1,1-Trichloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Carbon tetrachloride	UG/KG	12.2 U	125 U	ND	ND		0/7
Bromodichloromethane	UG/KG	12.2 U	125 U	ND	ND		0/7
1,2-Dichloropropane	UG/KG	12.2 U	125 U	ND	ND		0/7
cis-1,3-Dichloropropene	UG/KG	12.2 U	125 U	ND	ND		0/7
Trichloroethene	UG/KG	12.2 U	125 U	ND	ND		0/7
Dibromochloromethane	UG/KG	12.2 U	125 U	ND	ND		0/7
1,1,2-Trichloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Benzene	UG/KG	12.2 U	125 U	ND	ND		0/7
trans-1,3-Dichloropropene	UG/KG	12.2 U	125 U	ND	ND		0/7
Bromoform	UG/KG	12.2 U	125 U	ND	ND		0/7
4-Methyl-2-pentanone	UG/KG	18.5 U	76.9 U	9 J	17	69-OS-SD02-06	3/7
2-Hexanone	UG/KG	12.2 U	125 U	ND	ND		0/7
Tetrachloroethene	UG/KG	12.2 U	125 U	ND	ND		0/7
1,1,2,2-Tetrachloroethane	UG/KG	12.2 U	125 U	ND	ND		0/7
Toluene	UG/KG	12.2 U	125 U	18 J	18 J	69-DA-SD04-06	1/7
Chlorobenzene	UG/KG	12.2 U	125 U	ND	ND		0/7
Ethylbenzene	UG/KG	12.2 U	125 U	ND	ND		0/7
Styrene	UG/KG	12.2 U	125 U	ND	ND		0/7
Xylenes (total)	UG/KG	12.2 U	125 U	ND	ND		0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>PESTICIDE/PCBS</u>							
alpha-BHC	UG/KG	2.01 UJ	21.2 UJ	3.1 J	3.1 J	69-0S-SD02-06	1/7
beta-BHC	UG/KG	2.01 UJ	21.2 UJ	23.4 J	23.4 J	69-0S-SD02-06	1/7
delta-BHC	UG/KG	2.01 UJ	21.2 UJ	54.5 J	54.5 J	69-0S-SD02-06	1/7
Lindane (gamma-BHC)	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Heptachlor	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Aldrin	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Heptachlor epoxide	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Endosulfan I	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Dieldrin	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
4,4'-DDE	UG/KG	3.89 UJ	41.2 UJ	13.3 J	13.3 J	69-DA-SD02-06	1/7
Endrin	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
Endosulfan II	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
4,4'-DDD	UG/KG	3.89 UJ	41.2 UJ	1.5 J	13.9 J	69-DA-SD04-06	3/7
Endosulfan sulfate	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
4,4'-DDT	UG/KG	3.89 UJ	41.2 UJ	2.1 J	6.6 J	69-DA-SD04-06	2/7
Methoxychlor	UG/KG	20.1 UJ	212 UJ	ND	ND		0/7
Endrin ketone	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
Endrin aldehyde	UG/KG	3.89 UJ	41.2 UJ	ND	ND		0/7
alpha-Chlordane	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
gamma-Chlordane	UG/KG	2.01 UJ	21.2 UJ	ND	ND		0/7
Toxaphene	UG/KG	201 UJ	2120 UJ	ND	ND		0/7
Aroclor 1016	UG/KG	38.9 UJ	412 UJ	ND	ND		0/7
Aroclor 1221	UG/KG	79.1 UJ	838 UJ	ND	ND		0/7
Aroclor 1232	UG/KG	38.9 UJ	412 UJ	ND	ND		0/7
Aroclor 1242	UG/KG	38.9 UJ	412 UJ	ND	ND		0/7
Aroclor 1248	UG/KG	38.9 UJ	412 UJ	ND	ND		0/7
Aroclor 1254	UG/KG	40.2 UJ	412 UJ	79 J	79 J	69-0S-SD01-06	1/7
Aroclor 1260	UG/KG	38.9 UJ	412 UJ	ND	ND		0/7

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	403 U	3440 U	60 J	960 J	69-DA-SD01-06	2/7
Chloroacetophenone	UG/KG	403 U	4120 U	ND	ND		0/7
Hydroxyacetophenone	UG/KG	2010 U	20600 U	ND	ND		0/7
Bis(2'-chloroethyl)disulfide	UG/KG	2010 U	20600 U	ND	ND		0/7
Bis(2'-chloroethyl)trisulfide	UG/KG	2010 U	20600 U	ND	ND		0/7
1,4-Dithiane	UG/KG	403 U	4120 U	ND	ND		0/7
1,4-Oxathiane	UG/KG	403 U	4120 U	ND	ND		0/7
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	7.56 U	81.2 U	ND	ND		0/7

**APPENDIX O.20**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SEDIMENT INORGANICS**

---

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
	<u>UNITS</u>						
Aluminum	MG/KG	2900.0	10200.0	1050.0	23700.0	1570	1550.0
Antimony	MG/KG	20.5 U	5.30 U	2.90 U	12.2 U	3.3 U	2.60 U
Arsenic	MG/KG	7.50 UJ	1.90 U	1.10 U	4.50 U	1.2 U	0.970 U
Barium	MG/KG	35.6 U	29.6	6.80	131.0	12.1	4.60 U
Beryllium	MG/KG	3.40 U	0.940	0.480 U	2.00	0.54 U	0.440 U
Cadmium	MG/KG	6.20 U	1.60 U	0.890 U	3.70 U	1 U	0.800 U
Calcium	MG/KG	5480.0	1830.0	403.0	5600.0	107	41.9 U
Chromium	MG/KG	18.7 U	10.9 J	2.70 U	21.5	3 U	2.40 U
Cobalt	MG/KG	50.4 U	13.0 U	7.20 U	29.8 U	8 U	6.50 U
Copper	MG/KG	42.1 U	10.8 U	6.00 U	24.9 U	6.7 U	21.7
Iron	MG/KG	779.0	2050.0	369.0	8930.0	2360	534.0
Lead	MG/KG	14.2	18.3	4.00	45.5	5.3	8.20 J
Magnesium	MG/KG	5190.0	1210.0	51.9	886.0	28	37.2
Manganese	MG/KG	19.6	38.2	3.30	44.1	5.5	1.80 U
Mercury	MG/KG	0.560	0.160 U	0.060 U	0.500	0.12 U	0.080 U
Nickel	MG/KG	35.3 U	9.10 U	5.00 U	20.9 U	5.6 U	4.60 U
Potassium	MG/KG	779.0 UJ	452.0 J	111.0 UJ	462.0 UJ	124 UJ	101.0 U
Selenium	MG/KG	6.50 U	1.70 U	0.920 UJ	3.80 UJ	1 UJ	0.840 UJ
Silver	MG/KG	74.5 J	0.270 UJ	0.260 J	0.620 UJ	17.7 J	0.130 UJ
Sodium	MG/KG	17800.0	1410.0	68.6 U	286.0 U	77.2 U	63.7 UJ
Thallium	MG/KG	11.9 U	3.10 U	1.70 U	7.10 U	1.9 U	1.50 U
Vanadium	MG/KG	43.1 U	11.1 U	6.10 U	25.5 U	6.9 U	5.60 U
Zinc	MG/KG	44.8	15.7	44.2	551.0	98.4	44.3



FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID: 69-0S-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

---

	UNITS	
Aluminum	MG/KG	2300.0
Antimony	MG/KG	1.90 U
Arsenic	MG/KG	0.700 U
Barium	MG/KG	3.30 U
Beryllium	MG/KG	0.320 U
Cadmium	MG/KG	0.580 U
Calcium	MG/KG	30.3 U
Chromium	MG/KG	2.90
Cobalt	MG/KG	4.70 U
Copper	MG/KG	3.90 U
Iron	MG/KG	571.0
Lead	MG/KG	3.10 J
Magnesium	MG/KG	49.5
Manganese	MG/KG	1.40
Mercury	MG/KG	0.040 U
Nickel	MG/KG	3.30 U
Potassium	MG/KG	104.0
Selenium	MG/KG	0.610 UJ
Silver	MG/KG	0.100 UJ
Sodium	MG/KG	46.1 UJ
Thallium	MG/KG	1.10 U
Vanadium	MG/KG	4.00 U
Zinc	MG/KG	6.60 U

FREQUENCY OF DETECTION SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:

Laboratory Sample ID:

Date Sampled:

Percent Solids

		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM	OF
						DETECTED	DETECTION
	<u>UNITS</u>						
Aluminum	MG/KG	NA	NA	1050	23700	69-DA-SD04-06	7/7
Antimony	MG/KG	1.9 U	20.5 U	ND	ND		0/7
Arsenic	MG/KG	0.7 U	7.5 UJ	ND	ND		0/7
Barium	MG/KG	3.3 U	35.6 U	6.8	131	69-DA-SD04-06	4/7
Beryllium	MG/KG	0.32 U	3.4 U	0.94	2	69-DA-SD04-06	2/7
Cadmium	MG/KG	0.58 U	6.2 U	ND	ND		0/7
Calcium	MG/KG	30.3 U	41.9 U	107	5600	69-DA-SD04-06	6/7
Chromium	MG/KG	2.4 U	18.7 U	2.9	21.5	69-DA-SD04-06	3/7
Cobalt	MG/KG	4.7 U	50.4 U	ND	ND		0/7
Copper	MG/KG	3.9 U	42.1 U	21.7	21.7	69-OS-SD02-06	1/7
Iron	MG/KG	NA	NA	369	8930	69-DA-SD04-06	7/7
Lead	MG/KG	NA	NA	3.1 J	45.5	69-DA-SD04-06	7/7
Magnesium	MG/KG	NA	NA	28	5190	69-DA-SD01-06	7/7
Manganese	MG/KG	1.8 U	1.8 U	1.4	44.1	69-DA-SD04-06	6/7
Mercury	MG/KG	0.04 U	0.16 U	0.5	0.56	69-DA-SD01-06	2/7
Nickel	MG/KG	3.3 U	35.3 U	ND	ND		0/7
Potassium	MG/KG	101 U	779 UJ	104	452 J	69-DA-SD02-06	2/7
Selenium	MG/KG	0.61 UJ	6.5 U	ND	ND		0/7
Silver	MG/KG	0.1 UJ	0.62 UJ	0.26 J	74.5 J	69-DA-SD01-06	4/7
Sodium	MG/KG	46.1 UJ	286 U	1410	17800	69-DA-SD01-06	2/7
Thallium	MG/KG	1.1 U	11.9 U	ND	ND		0/7
Vanadium	MG/KG	4 U	43.1 U	ND	ND		0/7
Zinc	MG/KG	6.6 U	6.6 U	15.7	551	69-DA-SD04-06	7/7

**APPENDIX O.21**  
**SITE 69 EVERETT CREEK SEDIMENT ORGANICS**

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92	
Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03	
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
BETA-BHC	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
DELTA-BHC	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
GAMMA-BHC(LINDANE)	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
HEPTACHLOR	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
ALDRIN	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
HEPTACHLOR EPOXIDE	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
ENDOSULFAN I	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
DIELDRIN	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
4,4'-DDE	UG/KG	25 U	14 U	11 U	4.1 UJ	6.6 J
ENDRIN	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
ENDOSULFAN II	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
4,4'-DDD	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
ENDOSULFAN SULFATE	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
4,4'-DDT	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
METHOXYCHLOR	UG/KG	130 U	74 U	58 U	21 UJ	35 U
ENDRIN KETONE	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
ENDRIN ALDEHYDE	UG/KG	25 U	14 U	11 U	4.1 UJ	6.8 U
ALPHA CHLORDANE	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
GAMMA CHLORDANE	UG/KG	13 U	7.4 U	5.8 U	2.1 UJ	3.5 U
TOXAPHENE	UG/KG	1300 U	740 U	580 U	210 UJ	350 U
PCB-1016	UG/KG	250 U	140 U	110 U	41 UJ	68 U
PCB-1221	UG/KG	510 U	290 U	230 U	82 UJ	140 U
PCB-1232	UG/KG	250 U	140 U	110 U	41 UJ	68 U
PCB-1242	UG/KG	250 U	140 U	110 U	41 UJ	68 U
PCB-1248	UG/KG	250 U	140 U	110 U	41 UJ	68 U
PCB-1254	UG/KG	250 U	140 U	110 U	41 UJ	68 U
PCB-1260	UG/KG	250 U	140 U	110 U	41 UJ	68 U
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
BROMOMETHANE	UG/KG	83 U	2600 U	34 U	12 UJ	15 UJ
VINYL CHLORIDE	UG/KG	83 U	2600 U	34 U	12 U	15 U
CHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
METHYLENE CHLORIDE	UG/KG	83 U	1200 J	34 U	12 U	15 U
ACETONE	UG/KG	83 U	4600	240	12 U	15 U
CARBON DISULFIDE	UG/KG	83 U	2600 U	35	12 U	15 U
1,1-DICHLOROETHENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,1-DICHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,2-DICHLOROETHENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
CHLOROFORM	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,2-DICHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
2-BUTANONE	UG/KG	83 U	5300	34 U	12 U	15 U

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92
	Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
CARBON TETRACHLORIDE	UG/KG	83 U	2600 UJ	34 U	12 U	15 U
BROMODICHLOROMETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,2-DICHLOROPROPANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
CIS-1,3-DICHLOROPROPENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
TRICHLOROETHENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
DIBROMOCHLOROMETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,1,2-TRICHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
BENZENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
BROMOFORM	UG/KG	83 U	2600 U	34 U	12 U	15 U
4-METHYL-2-PENTANONE	UG/KG	83 U	2600 U	34 U	12 U	15 U
2-HEXANONE	UG/KG	83 U	2600 U	34 U	12 U	15 U
TETRACHLOROETHENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	83 U	2600 U	34 U	12 U	15 U
TOLUENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
CHLOROBENZENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
ETHYLBENZENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
STYRENE	UG/KG	83 U	2600 U	34 U	12 U	15 U
TOTAL XYLENES	UG/KG	83 U	2600 U	34 U	12 U	15 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	2500 U	1400 U	1100 U	410 UJ	680 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2-CHLOROPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
1,3-DICHLOROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
1,4-DICHLOROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
1,2-DICHLOROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2-METHYLPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	2500 U	1400 U	1100 U	410 U	680 UJ
4-METHYLPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	2500 U	1400 U	1100 U	410 U	680 UJ
HEXACHLOROETHANE	UG/KG	2500 U	1400 UJ	1100 UJ	410 U	680 U
NITROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
ISOPHORONE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2-NITROPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4-DIMETHYLPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4-DICHLOROPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
1,2,4-TRICHLOROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
NAPHTHALENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
4-CHLORANILINE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
HEXACHLOROBUTADIENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92	
Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03	
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2-METHYLNAPHTHALENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4,6-TRICHLOROPHENOL	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4,5-TRICHLOROPHENOL	UG/KG	6100 U	3500 U	2700 U	980 U	1600 U
2-CHLORONAPHTHALENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2-NITROANILINE	UG/KG	6100 U	3500 U	2700 U	980 U	1600 U
DIMETHYL PHTHALATE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
ACENAPHTHYLENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,6-DINITROTOLUENE	UG/KG	2500 U	1400 UJ	1100 UJ	410 U	680 U
3-NITROANILINE	UG/KG	6100 U	3500 U	2700 U	980 U	1600 U
ACENAPHTHENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4-DINITROPHENOL	UG/KG	6100 U	3500 UJ	2700 UJ	980 U	1600 U
4-NITROPHENOL	UG/KG	6100 U	3500 U	2700 U	980 U	1600 U
DIBENZOFURAN	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
2,4-DINITROTOLUENE	UG/KG	2500 U	1400 UJ	1100 UJ	410 U	680 U
DIETHYL PHTHALATE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
FLUORENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
4-NITROANILINE	UG/KG	6100 U	3500 U	2700 U	980 U	1600 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	6100 U	3500 UJ	2700 UJ	980 U	1600 U
N-NITRISODIPHENYLAMINE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
HEXACHLOROBENZENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
PENTACHLOROPHENOL	UG/KG	6100 U	3500 U	2700 U	980 UJ	1600 U
PHENANTHRENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
ANTHRACENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
DI-N-BUTYL PHTHALATE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
FLUORANTHENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
CARBAZOLE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
PYRENE	UG/KG	2500 U	1400 U	1100 U	410 UJ	680 UJ
BUTYL BENZYL PHTHALATE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
3,3-DICHLOROBENZIDINE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BENZO(A)ANTHRACENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
CHRYSENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	2500 U	1400 U	1100 U	85 J	130 J
DI-N-OCTYL PHTHALATE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BENZO(B)FLUORANTHENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BENZO(K)FLUORANTHENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BENZO(A)PYRENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
INDENO(1,2,3-CD) PYRENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
DIBENZ(AH)ANTHRACENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U
BENZO(G,H,I)PERYLENE	UG/KG	2500 U	1400 U	1100 U	410 U	680 U

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<u>PESTICIDE/PCBS</u>							
ALPHA-BHC	UG/KG	2.1 UJ	13 U	ND	ND		0/5
BETA-BHC	UG/KG	2.1 UJ	13 U	ND	ND		0/5
DELTA-BHC	UG/KG	2.1 UJ	13 U	ND	ND		0/5
GAMMA-BHC(LINDANE)	UG/KG	2.1 UJ	13 U	ND	ND		0/5
HEPTACHLOR	UG/KG	2.1 UJ	13 U	ND	ND		0/5
ALDRIN	UG/KG	2.1 UJ	13 U	ND	ND		0/5
HEPTACHLOR EPOXIDE	UG/KG	2.1 UJ	13 U	ND	ND		0/5
ENDOSULFAN I	UG/KG	2.1 UJ	13 U	ND	ND		0/5
DIELDRIN	UG/KG	4.1 UJ	25 U	ND	ND		0/5
4,4'-DDE	UG/KG	4.1 UJ	25 U	6.6 J	6.6 J	69-EC4-SD-6122	1/5
ENDRIN	UG/KG	4.1 UJ	25 U	ND	ND		0/5
ENDOSULFAN II	UG/KG	4.1 UJ	25 U	ND	ND		0/5
4,4'-DDD	UG/KG	4.1 UJ	25 U	ND	ND		0/5
ENDOSULFAN SULFATE	UG/KG	4.1 UJ	25 U	ND	ND		0/5
4,4'-DDT	UG/KG	4.1 UJ	25 U	ND	ND		0/5
METHOXYCHLOR	UG/KG	21 UJ	130 U	ND	ND		0/5
ENDRIN KETONE	UG/KG	4.1 UJ	25 U	ND	ND		0/5
ENDRIN ALDEHYDE	UG/KG	4.1 UJ	25 U	ND	ND		0/5
ALPHA CHLORDANE	UG/KG	2.1 UJ	13 U	ND	ND		0/5
GAMMA CHLORDANE	UG/KG	2.1 UJ	13 U	ND	ND		0/5
TOXAPHENE	UG/KG	210 UJ	1300 U	ND	ND		0/5
PCB-1016	UG/KG	41 UJ	250 U	ND	ND		0/5
PCB-1221	UG/KG	82 UJ	510 U	ND	ND		0/5
PCB-1232	UG/KG	41 UJ	250 U	ND	ND		0/5
PCB-1242	UG/KG	41 UJ	250 U	ND	ND		0/5
PCB-1248	UG/KG	41 UJ	250 U	ND	ND		0/5
PCB-1254	UG/KG	41 UJ	250 U	ND	ND		0/5
PCB-1260	UG/KG	41 UJ	250 U	ND	ND		0/5
<u>VOLATILES</u>							
CHLOROMETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
BROMOMETHANE	UG/KG	12 UJ	2600 U	ND	ND		0/5
VINYL CHLORIDE	UG/KG	12 U	2600 U	ND	ND		0/5
CHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
METHYLENE CHLORIDE	UG/KG	12 U	83 U	1200 J	1200 J	69-EC3-SD-03	1/5
ACETONE	UG/KG	12 U	83 U	240	4600	69-EC3-SD-03	2/5
CARBON DISULFIDE	UG/KG	12 U	2600 U	35	35	69-EC3-SD-612	1/5
1,1-DICHLOROETHENE	UG/KG	12 U	2600 U	ND	ND		0/5
1,1-DICHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
1,2-DICHLOROETHENE	UG/KG	12 U	2600 U	ND	ND		0/5
CHLOROFORM	UG/KG	12 U	2600 U	ND	ND		0/5
1,2-DICHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
2-BUTANONE	UG/KG	12 U	83 U	5300	5300	69-EC3-SD-03	1/5

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES Cont.</u>							
1,1,1-TRICHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
CARBON TETRACHLORIDE	UG/KG	12 U	2600 UJ	ND	ND		0/5
BROMODICHLOROMETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
1,2-DICHLOROPROPANE	UG/KG	12 U	2600 U	ND	ND		0/5
CIS-1,3-DICHLOROPROPENE	UG/KG	12 U	2600 U	ND	ND		0/5
TRICHLOROETHENE	UG/KG	12 U	2600 U	ND	ND		0/5
DIBROMOCHLOROMETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
1,1,2-TRICHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
BENZENE	UG/KG	12 U	2600 U	ND	ND		0/5
TRANS-1,3-DICHLOROPROPENE	UG/KG	12 U	2600 U	ND	ND		0/5
BROMOFORM	UG/KG	12 U	2600 U	ND	ND		0/5
4-METHYL-2-PENTANONE	UG/KG	12 U	2600 U	ND	ND		0/5
2-HEXANONE	UG/KG	12 U	2600 U	ND	ND		0/5
TETRACHLOROETHENE	UG/KG	12 U	2600 U	ND	ND		0/5
1,1,2,2-TETRACHLOROETHANE	UG/KG	12 U	2600 U	ND	ND		0/5
TOLUENE	UG/KG	12 U	2600 U	ND	ND		0/5
CHLOROBENZENE	UG/KG	12 U	2600 U	ND	ND		0/5
ETHYLBENZENE	UG/KG	12 U	2600 U	ND	ND		0/5
STYRENE	UG/KG	12 U	2600 U	ND	ND		0/5
TOTAL XYLENES	UG/KG	12 U	2600 U	ND	ND		0/5
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	410 UJ	2500 U	ND	ND		0/5
BIS(2-CHLOROETHYL) ETHER	UG/KG	410 U	2500 U	ND	ND		0/5
2-CHLOROPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
1,3-DICHLOROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
1,4-DICHLOROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
1,2-DICHLOROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
2-METHYLPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	410 U	2500 U	ND	ND		0/5
4-METHYLPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
N-NITROSODI-N-PROPYLAMINE	UG/KG	410 U	2500 U	ND	ND		0/5
HEXACHLOROETHANE	UG/KG	410 U	2500 U	ND	ND		0/5
NITROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
ISOPHORONE	UG/KG	410 U	2500 U	ND	ND		0/5
2-NITROPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
2,4-DIMETHYLPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
BIS(2-CHLOROETHOXY) METHANE	UG/KG	410 U	2500 U	ND	ND		0/5
2,4-DICHLOROPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
1,2,4-TRICHLOROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
NAPHTHALENE	UG/KG	410 U	2500 U	ND	ND		0/5
4-CHLORANILINE	UG/KG	410 U	2500 U	ND	ND		0/5
HEXACHLOROBUTADIENE	UG/KG	410 U	2500 U	ND	ND		0/5



SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO - 0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
	Units						
<u>SEMIVOLATILES Cont.</u>							
4-CHLORO-3-METHYLPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
2-METHYLNAPHTHALENE	UG/KG	410 U	2500 U	ND	ND		0/5
HEXACHLOROCYCLOPENTADIENE	UG/KG	410 U	2500 U	ND	ND		0/5
2,4,6-TRICHLOROPHENOL	UG/KG	410 U	2500 U	ND	ND		0/5
2,4,5-TRICHLOROPHENOL	UG/KG	980 U	6100 U	ND	ND		0/5
2-CHLORONAPHTHALENE	UG/KG	410 U	2500 U	ND	ND		0/5
2-NITROANILINE	UG/KG	980 U	6100 U	ND	ND		0/5
DIMETHYL PHTHALATE	UG/KG	410 U	2500 U	ND	ND		0/5
ACENAPHTHYLENE	UG/KG	410 U	2500 U	ND	ND		0/5
2,6-DINITROTOLUENE	UG/KG	410 U	2500 U	ND	ND		0/5
3-NITROANILINE	UG/KG	980 U	6100 U	ND	ND		0/5
ACENAPHTHENE	UG/KG	410 U	2500 U	ND	ND		0/5
2,4-DINITROPHENOL	UG/KG	980 U	6100 U	ND	ND		0/5
4-NITROPHENOL	UG/KG	980 U	6100 U	ND	ND		0/5
DIBENZOFURAN	UG/KG	410 U	2500 U	ND	ND		0/5
2,4-DINITROTOLUENE	UG/KG	410 U	2500 U	ND	ND		0/5
DIETHYL PHTHALATE	UG/KG	410 U	2500 U	ND	ND		0/5
4-CHLOROPHENYL PHENYL ETHER	UG/KG	410 U	2500 U	ND	ND		0/5
FLUORENE	UG/KG	410 U	2500 U	ND	ND		0/5
4-NITROANILINE	UG/KG	980 U	6100 U	ND	ND		0/5
4,6-DINITRO-2-METHYLPHENOL	UG/KG	980 U	6100 U	ND	ND		0/5
N-NITRISODIPHENYLAMINE	UG/KG	410 U	2500 U	ND	ND		0/5
4-BROMOPHENYL PHENYL ETHER	UG/KG	410 U	2500 U	ND	ND		0/5
HEXACHLOROBENZENE	UG/KG	410 U	2500 U	ND	ND		0/5
PENTACHLOROPHENOL	UG/KG	980 UJ	6100 U	ND	ND		0/5
PHENANTHRENE	UG/KG	410 U	2500 U	ND	ND		0/5
ANTHRACENE	UG/KG	410 U	2500 U	ND	ND		0/5
DI-N-BUTYL PHTHALATE	UG/KG	410 U	2500 U	ND	ND		0/5
FLUORANTHENE	UG/KG	410 U	2500 U	ND	ND		0/5
CARBAZOLE	UG/KG	410 U	2500 U	ND	ND		0/5
PYRENE	UG/KG	410 UJ	2500 U	ND	ND		0/5
BUTYL BENZYL PHTHALATE	UG/KG	410 U	2500 U	ND	ND		0/5
3,3-DICHLOROBENZIDINE	UG/KG	410 U	2500 U	ND	ND		0/5
BENZO(A)ANTHRACENE	UG/KG	410 U	2500 U	ND	ND		0/5
CHRYSENE	UG/KG	410 U	2500 U	ND	ND		0/5
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	1100 U	2500 U	85 J	130 J	69-EC4-SD-6122	2/5
DI-N-OCTYL PHTHALATE	UG/KG	410 U	2500 U	ND	ND		0/5
BENZO(B)FLUORANTHENE	UG/KG	410 U	2500 U	ND	ND		0/5
BENZO(K)FLUORANTHENE	UG/KG	410 U	2500 U	ND	ND		0/5
BENZO(A)PYRENE	UG/KG	410 U	2500 U	ND	ND		0/5
INDENO(1,2,3-CD) PYRENE	UG/KG	410 U	2500 U	ND	ND		0/5
DIBENZ(A,H)ANTHRACENE	UG/KG	410 U	2500 U	ND	ND		0/5
BENZO(G,H,I)PERYLENE	UG/KG	410 U	2500 U	ND	ND		0/5

**APPENDIX O.22**  
**SITE 69 EVERETT CREEK SEDIMENT INORGANICS**

---

SITE 69 EVERETT CREEK SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
TOTAL METALS

	Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92
	Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03
Parameter	Units					
ALUMINUM	MG/KG	8560	32700	23200	888 J	6650
ANTIMONY	MG/KG	17.5 U	8.4 U	9.5 U	3.2 U	4.7 U
ARSENIC	MG/KG	3.7 UJ	5.3 B	4.4 B	2.7 UJ	5.3
BARIUM	MG/KG	13 JB	26.4 B	17.7 B	1.1 UJ	7 U
BERYLLIUM	MG/KG	0.93 B	0.96 B	0.7 B	0.13 JB	0.43 JB
CADMIUM	MG/KG	5.2 JB	2.8 BJ	2.2 BJ	0.52 JB	1.8 J
CALCIUM	MG/KG	5500 B	3020	3880	627 JB	1380 JB
CHROMIUM	MG/KG	11.7 B	43.8	29.2	3.6 J	12.1
COBALT	MG/KG	7 JB	3.3 B	2.3 B	0.46 U	1.3 B
COPPER	MG/KG	16.2 JB	11.4 B	6.5 BJ	0.91 UJ	3.4 UJ
IRON	MG/KG	13700	28900	28500	4150 J	12000 J
LEAD	MG/KG	30.8	25.2	11	2.1 UJ	7.5 J
MAGNESIUM	MG/KG	4990 B	7250	5810	313 JB	2000 J
MANGANESE	MG/KG	59.1	83.3	85.9	4.1 J	27.2
MERCURY	MG/KG	0.17 B	0.35 U	0.3 U	0.02 U	0.06 U
NICKEL	MG/KG	9.9 UJ	4.8 U	5.5 U	1.8 U	2.7 U
POTASSIUM	MG/KG	1420 B	4290	3470	129 JB	1050 B
SELENIUM	MG/KG	5.5 U	3.7 U	3.5 U	1.2 U	1.5 U
SILVER	MG/KG	5.6 UJ	3.3 U	2.3 U	0.46 UJ	0.99 UJ
SODIUM	MG/KG	18000	21800	16700	1100 JB	5040 J
THALLIUM	MG/KG	2.2 UJ	1.5 U	1.4 U	0.48 UJ	0.61 UJ
VANADIUM	MG/KG	20.1 B	48.8	29.8 B	7.2 JB	20.4
ZINC	MG/KG	62	57.3	31.8	3.3 UJ	15.7 U

SITE 69 EVERETT CREEK SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
ALUMINUM	MG/KG	NA	NA	888 J	32700	69-EC3-SD-03	5/5
ANTIMONY	MG/KG	3.2 U	17.5 U	ND	ND		0/5
ARSENIC	MG/KG	2.7 UJ	3.7 UJ	4.4 B	5.3 B	69-EC4-SD-6122	3/5
BARIUM	MG/KG	1.1 UJ	7 U	13 JB	26.4 B	69-EC3-SD-03	3/5
BERYLLIUM	MG/KG	NA	NA	0.13 JB	0.96 B	69-EC3-SD-03	5/5
CADMIUM	MG/KG	NA	NA	0.52 JB	5.2 JB	69-EC1-SD-06	5/5
CALCIUM	MG/KG	NA	NA	627 JB	5500 B	69-EC1-SD-06	5/5
CHROMIUM	MG/KG	NA	NA	3.6 J	43.8	69-EC3-SD-03	5/5
COBALT	MG/KG	0.46 U	0.46 U	1.3 B	7 JB	69-EC1-SD-06	4/5
COPPER	MG/KG	0.91 UJ	3.4 UJ	6.5 BJ	16.2 JB	69-EC1-SD-06	3/5
IRON	MG/KG	NA	NA	4150 J	28900	69-EC3-SD-03	5/5
LEAD	MG/KG	2.1 UJ	2.1 UJ	7.5 J	30.8	69-EC1-SD-06	4/5
MAGNESIUM	MG/KG	NA	NA	313 JB	7250	69-EC3-SD-03	5/5
MANGANESE	MG/KG	NA	NA	4.1 J	85.9	69-EC3-SD-612	5/5
MERCURY	MG/KG	0.02 U	0.35 U	0.17 B	0.17 B	69-EC1-SD-06	1/5
NICKEL	MG/KG	1.8 U	9.9 UJ	ND	ND		0/5
POTASSIUM	MG/KG	NA	NA	129 JB	4290	69-EC3-SD-03	5/5
SELENIUM	MG/KG	1.2 U	5.5 U	ND	ND		0/5
SILVER	MG/KG	0.46 UJ	5.6 UJ	ND	ND		0/5
SODIUM	MG/KG	NA	NA	1100 JB	21800	69-EC3-SD-03	5/5
THALLIUM	MG/KG	0.48 UJ	2.2 UJ	ND	ND		0/5
VANADIUM	MG/KG	NA	NA	7.2 JB	48.8	69-EC3-SD-03	5/5
ZINC	MG/KG	3.3 UJ	15.7 U	31.8	62	69-EC1-SD-06	3/5

**APPENDIX O.23**  
**SITE 69 NEW RIVER SEDIMENT ORGANICS**

---

SITE 69 NEW RIVER SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
Depth:	N/A	N/A	N/A	N/A	N/A
Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units				
<u>PESTICIDE/PCBS</u>					
ALPHA-BHC	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
BETA-BHC	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
DELTA-BHC	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
GAMMA-BHC(LINDANE)	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
HEPTACHLOR	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
ALDRIN	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
HEPTACHLOR EPOXIDE	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
ENDOSULFAN I	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
DIELDRIN	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
4,4'-DDE	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
ENDRIN	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
ENDOSULFAN II	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
4,4'-DDD	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
ENDOSULFAN SULFATE	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
4,4'-DDT	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
METHOXYCHLOR	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
ENDRIN KETONE	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
ENDRIN ALDEHYDE	UG/KG	4.2 U	4.4 UJ	4.2 U	4.3 UJ
ALPHA CHLORDANE	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
GAMMA CHLORDANE	UG/KG	2.2 U	2.3 UJ	2.2 U	2.2 UJ
TOXAPHENE	UG/KG	220 U	230 UJ	220 U	220 UJ
PCB-1016	UG/KG	42 U	44 UJ	42 U	43 UJ
PCB-1221	UG/KG	85 U	89 UJ	86 U	86 UJ
PCB-1232	UG/KG	42 U	44 UJ	42 U	43 UJ
PCB-1242	UG/KG	42 U	44 UJ	42 U	43 UJ
PCB-1248	UG/KG	42 U	44 UJ	42 U	43 UJ
PCB-1254	UG/KG	42 U	44 UJ	42 U	43 UJ
PCB-1260	UG/KG	42 U	44 UJ	42 U	43 UJ
<u>VOLATILES</u>					
CHLOROMETHANE	UG/KG	12 U	13 U	12 U	13 U
BROMOMETHANE	UG/KG	12 U	13 UJ	12 UJ	13 U
VINYL CHLORIDE	UG/KG	12 U	13 U	12 U	13 U
CHLOROETHANE	UG/KG	12 U	13 U	12 U	13 U
METHYLENE CHLORIDE	UG/KG	12 U	13 U	12 U	13 U
ACETONE	UG/KG	22	13 U	12 U	23
CARBON DISULFIDE	UG/KG	12 U	13 U	12 U	13 U
1,1-DICHLOROETHENE	UG/KG	12 U	13 U	12 U	13 U
1,1-DICHLOROETHANE	UG/KG	12 U	13 U	12 U	13 U
1,2-DICHLOROETHENE	UG/KG	12 U	13 U	12 U	13 U
CHLOROFORM	UG/KG	12 U	13 U	12 U	13 U
1,2-DICHLOROETHANE	UG/KG	12 U	13 U	12 U	13 U
2-BUTANONE	UG/KG	12 U	13 U	12 U	13 U

SITE 69 NEW RIVER SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
Depth:	N/A	N/A	N/A	N/A	N/A
Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14

Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	12 U	13 U	12 U	12 U	13 U
CARBON TETRACHLORIDE	UG/KG	12 U	13 U	12 U	12 U	13 U
BROMODICHLOROMETHANE	UG/KG	12 U	13 U	12 U	12 U	13 U
1,2-DICHLOROPROPANE	UG/KG	12 U	13 U	12 U	12 U	13 U
CIS-1,3-DICHLOROPROPENE	UG/KG	12 U	13 U	12 U	12 U	13 U
TRICHLOROETHENE	UG/KG	12 U	13 U	12 U	12 U	13 U
DIBROMOCHLOROMETHANE	UG/KG	12 U	13 U	12 U	12 U	13 U
1,1,2-TRICHLOROETHANE	UG/KG	12 U	13 U	12 U	12 U	13 U
BENZENE	UG/KG	12 U	13 U	12 U	12 U	13 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	12 U	13 U	12 U	12 U	13 U
BROMOFORM	UG/KG	12 U	13 U	12 U	12 U	13 U
4-METHYL-2-PENTANONE	UG/KG	12 U	13 U	12 U	12 U	13 U
2-HEXANONE	UG/KG	12 U	13 U	12 U	12 U	13 U
TETRACHLOROETHENE	UG/KG	12 U	13 U	12 U	12 U	13 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	12 U	13 U	12 U	12 U	13 U
TOLUENE	UG/KG	12 U	13 U	12 U	12 U	13 U
CHLOROBENZENE	UG/KG	12 U	13 U	12 U	12 U	13 U
ETHYLBENZENE	UG/KG	12 U	13 U	12 U	12 U	13 U
STYRENE	UG/KG	12 U	13 U	12 U	12 U	13 U
TOTAL XYLENES	UG/KG	12 U	13 U	12 U	12 U	13 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	420 U	430 U	420 U	420 U	430 U
2-CHLOROPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
1,3-DICHLOROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
1,4-DICHLOROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
1,2-DICHLOROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
2-METHYLPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	420 U	430 UJ	420 UJ	420 U	430 U
4-METHYLPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	420 U	430 UJ	420 UJ	420 U	430 U
HEXACHLOROETHANE	UG/KG	420 UJ	430 U	420 U	420 UJ	430 UJ
NITROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
ISOPHORONE	UG/KG	420 U	430 U	420 U	420 U	430 U
2-NITROPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4-DIMETHYLPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4-DICHLOROPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
1,2,4-TRICHLOROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
NAPHTHALENE	UG/KG	420 U	430 U	420 U	420 U	430 U
4-CHLORANILINE	UG/KG	420 U	430 U	420 U	420 U	430 U
HEXACHLOROBUTADIENE	UG/KG	420 U	430 U	420 U	420 U	430 U

SITE 69 NEW RIVER SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92	
Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14	
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
2-METHYLNAPHTHALENE	UG/KG	420 U	430 U	420 U	420 U	430 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4,6-TRICHLOROPHENOL	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4,5-TRICHLOROPHENOL	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
2-CHLORONAPHTHALENE	UG/KG	420 U	430 U	420 U	420 U	430 U
2-NITROANILINE	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
DIMETHYL PHTHALATE	UG/KG	420 U	430 U	420 U	420 U	430 U
ACENAPHTHYLENE	UG/KG	420 U	430 U	420 U	420 U	430 U
2,6-DINITROTOLUENE	UG/KG	420 UJ	430 U	420 U	420 UJ	430 UJ
3-NITROANILINE	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
ACENAPHTHENE	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4-DINITROPHENOL	UG/KG	1000 UJ	1100 U	1000 U	1000 UJ	1000 UJ
4-NITROPHENOL	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
DIBENZOFURAN	UG/KG	420 U	430 U	420 U	420 U	430 U
2,4-DINITROTOLUENE	UG/KG	420 UJ	430 U	420 U	420 UJ	430 UJ
DIETHYL PHTHALATE	UG/KG	420 U	430 U	420 U	420 U	430 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420 U	430 U	420 U	420 U	430 U
FLUORENE	UG/KG	420 U	430 U	420 U	420 U	430 U
4-NITROANILINE	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1000 UJ	1100 U	1000 U	1000 UJ	1000 UJ
N-NITRISODIPHENYLAMINE	UG/KG	420 U	430 U	420 U	420 U	430 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	420 U	430 U	420 U	420 U	430 U
HEXACHLOROBENZENE	UG/KG	420 U	430 U	420 U	420 U	430 U
PENTACHLOROPHENOL	UG/KG	1000 U	1100 U	1000 U	1000 U	1000 U
PHENANTHRENE	UG/KG	420 U	430 U	420 U	420 U	430 U
ANTHRACENE	UG/KG	420 U	430 U	420 U	420 U	430 U
DI-N-BUTYL PHTHALATE	UG/KG	420 U	430 U	420 U	420 U	430 U
FLUORANTHENE	UG/KG	420 U	430 U	420 U	420 U	430 U
CARBAZOLE	UG/KG	420 U	430 U	420 U	420 U	430 U
PYRENE	UG/KG	420 U	430 UJ	420 UJ	420 U	430 U
BUTYL BENZYL PHTHALATE	UG/KG	420 U	430 U	420 U	420 U	430 U
3,3-DICHLOROBENZIDINE	UG/KG	420 U	430 U	420 U	420 U	430 U
BENZO(A)ANTHRACENE	UG/KG	420 U	430 U	420 U	420 U	430 U
CHRYSENE	UG/KG	420 U	430 U	420 U	420 U	430 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	420 U	92 J	47 J	420 U	430 U
DI-N-OCTYL PHTHALATE	UG/KG	420 U	430 U	420 U	420 U	430 U
BENZO(B)FLUORANTHENE	UG/KG	420 U	430 U	420 U	420 U	430 U
BENZO(K)FLUORANTHENE	UG/KG	420 U	430 U	420 U	420 U	430 U
BENZO(A)PYRENE	UG/KG	420 U	430 U	420 U	420 U	430 U
INDENO(1,2,3-CD) PYRENE	UG/KG	420 U	430 U	420 U	420 U	430 U
DIBENZ(AH)ANTHRACENE	UG/KG	420 U	430 U	420 U	420 U	430 U
BENZO(G,H,I)PERYLENE	UG/KG	420 U	430 U	420 U	420 U	430 U



SITE 69 NEW RIVER SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>PESTICIDE/PCBS</u>							
ALPHA-BHC	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
BETA-BHC	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
DELTA-BHC	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
GAMMA-BHC(LINDANE)	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
HEPTACHLOR	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
ALDRIN	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
HEPTACHLOR EPOXIDE	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
ENDOSULFAN I	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
DIELDRIN	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
4,4'-DDE	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
ENDRIN	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
ENDOSULFAN II	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
4,4'-DDD	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
ENDOSULFAN SULFATE	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
4,4'-DDT	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
METHOXYCHLOR	UG/KG	22 U	23 UJ	ND	ND		0/5
ENDRIN KETONE	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
ENDRIN ALDEHYDE	UG/KG	4.2 U	4.4 UJ	ND	ND		0/5
ALPHA CHLORDANE	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
GAMMA CHLORDANE	UG/KG	2.2 U	2.3 UJ	ND	ND		0/5
TOXAPHENE	UG/KG	220 U	230 UJ	ND	ND		0/5
PCB-1016	UG/KG	42 U	44 UJ	ND	ND		0/5
PCB-1221	UG/KG	85 U	89 UJ	ND	ND		0/5
PCB-1232	UG/KG	42 U	44 UJ	ND	ND		0/5
PCB-1242	UG/KG	42 U	44 UJ	ND	ND		0/5
PCB-1248	UG/KG	42 U	44 UJ	ND	ND		0/5
PCB-1254	UG/KG	42 U	44 UJ	ND	ND		0/5
PCB-1260	UG/KG	42 U	44 UJ	ND	ND		0/5
<u>VOLATILES</u>							
CHLOROMETHANE	UG/KG	12 U	13 U	ND	ND		0/5
BROMOMETHANE	UG/KG	12 U	13 UJ	ND	ND		0/5
VINYL CHLORIDE	UG/KG	12 U	13 U	ND	ND		0/5
CHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
METHYLENE CHLORIDE	UG/KG	12 U	13 U	ND	ND		0/5
ACETONE	UG/KG	12 U	13 U	22	120	69-NR3-SD-612	3/5
CARBON DISULFIDE	UG/KG	12 U	13 U	ND	ND		0/5
1,1-DICHLOROETHENE	UG/KG	12 U	13 U	ND	ND		0/5
1,1-DICHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
1,2-DICHLOROETHENE	UG/KG	12 U	13 U	ND	ND		0/5
CHLOROFORM	UG/KG	12 U	13 U	ND	ND		0/5
1,2-DICHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
2-BUTANONE	UG/KG	12 U	13 U	ND	ND		0/5

SITE 69 NEW RIVER SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES Cont.</u>							
1,1,1-TRICHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
CARBON TETRACHLORIDE	UG/KG	12 U	13 U	ND	ND		0/5
BROMODICHLOROMETHANE	UG/KG	12 U	13 U	ND	ND		0/5
1,2-DICHLOROPROPANE	UG/KG	12 U	13 U	ND	ND		0/5
CIS-1,3-DICHLOROPROPENE	UG/KG	12 U	13 U	ND	ND		0/5
TRICHLOROETHENE	UG/KG	12 U	13 U	ND	ND		0/5
DIBROMOCHLOROMETHANE	UG/KG	12 U	13 U	ND	ND		0/5
1,1,2-TRICHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
BENZENE	UG/KG	12 U	13 U	ND	ND		0/5
TRANS-1,3-DICHLOROPROPENE	UG/KG	12 U	13 U	ND	ND		0/5
BROMOFORM	UG/KG	12 U	13 U	ND	ND		0/5
4-METHYL-2-PENTANONE	UG/KG	12 U	13 U	ND	ND		0/5
2-HEXANONE	UG/KG	12 U	13 U	ND	ND		0/5
TETRACHLOROETHENE	UG/KG	12 U	13 U	ND	ND		0/5
1,1,2,2-TETRACHLOROETHANE	UG/KG	12 U	13 U	ND	ND		0/5
TOLUENE	UG/KG	12 U	13 U	ND	ND		0/5
CHLOROBENZENE	UG/KG	12 U	13 U	ND	ND		0/5
ETHYLBENZENE	UG/KG	12 U	13 U	ND	ND		0/5
STYRENE	UG/KG	12 U	13 U	ND	ND		0/5
TOTAL XYLENES	UG/KG	12 U	13 U	ND	ND		0/5
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	420 U	430 U	ND	ND		0/5
BIS(2-CHLOROETHYL) ETHER	UG/KG	420 U	430 U	ND	ND		0/5
2-CHLOROPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
1,3-DICHLOROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
1,4-DICHLOROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
1,2-DICHLOROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
2-METHYLPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	420 U	430 UJ	ND	ND		0/5
4-METHYLPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
N-NITROSODI-N-PROPYLAMINE	UG/KG	420 U	430 UJ	ND	ND		0/5
HEXACHLOROETHANE	UG/KG	420 UJ	430 U	ND	ND		0/5
NITROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
ISOPHORONE	UG/KG	420 U	430 U	ND	ND		0/5
2-NITROPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
2,4-DIMETHYLPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
BIS(2-CHLOROETHOXY) METHANE	UG/KG	420 U	430 U	ND	ND		0/5
2,4-DICHLOROPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
1,2,4-TRICHLOROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
NAPHTHALENE	UG/KG	420 U	430 U	ND	ND		0/5
4-CHLORANILINE	UG/KG	420 U	430 U	ND	ND		0/5
HEXACHLOROBUTADIENE	UG/KG	420 U	430 U	ND	ND		0/5

SITE 69 NEW RIVER SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>SEMIVOLATILES Cont.</u>							
4-CHLORO-3-METHYLPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
2-METHYLNAPHTHALENE	UG/KG	420 U	430 U	ND	ND		0/5
HEXACHLOROCYCLOPENTADIENE	UG/KG	420 U	430 U	ND	ND		0/5
2,4,6-TRICHLOROPHENOL	UG/KG	420 U	430 U	ND	ND		0/5
2,4,5-TRICHLOROPHENOL	UG/KG	1000 U	1100 U	ND	ND		0/5
2-CHLORONAPHTHALENE	UG/KG	420 U	430 U	ND	ND		0/5
2-NITROANILINE	UG/KG	1000 U	1100 U	ND	ND		0/5
DIMETHYL PHTHALATE	UG/KG	420 U	430 U	ND	ND		0/5
ACENAPHTHYLENE	UG/KG	420 U	430 U	ND	ND		0/5
2,6-DINITROTOLUENE	UG/KG	420 UJ	430 U	ND	ND		0/5
3-NITROANILINE	UG/KG	1000 U	1100 U	ND	ND		0/5
ACENAPHTHENE	UG/KG	420 U	430 U	ND	ND		0/5
2,4-DINITROPHENOL	UG/KG	1000 UJ	1100 U	ND	ND		0/5
4-NITROPHENOL	UG/KG	1000 U	1100 U	ND	ND		0/5
DIBENZOFURAN	UG/KG	420 U	430 U	ND	ND		0/5
2,4-DINITROTOLUENE	UG/KG	420 UJ	430 U	ND	ND		0/5
DIETHYL PHTHALATE	UG/KG	420 U	430 U	ND	ND		0/5
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420 U	430 U	ND	ND		0/5
FLUORENE	UG/KG	420 U	430 U	ND	ND		0/5
4-NITROANILINE	UG/KG	1000 U	1100 U	ND	ND		0/5
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1000 UJ	1100 U	ND	ND		0/5
N-NITRISODIPHENYLAMINE	UG/KG	420 U	430 U	ND	ND		0/5
4-BROMOPHENYL PHENYL ETHER	UG/KG	420 U	430 U	ND	ND		0/5
HEXACHLOROBENZENE	UG/KG	420 U	430 U	ND	ND		0/5
PENTACHLOROPHENOL	UG/KG	1000 U	1100 U	ND	ND		0/5
PHENANTHRENE	UG/KG	420 U	430 U	ND	ND		0/5
ANTHRACENE	UG/KG	420 U	430 U	ND	ND		0/5
DI-N-BUTYL PHTHALATE	UG/KG	420 U	430 U	ND	ND		0/5
FLUORANTHENE	UG/KG	420 U	430 U	ND	ND		0/5
CARBAZOLE	UG/KG	420 U	430 U	ND	ND		0/5
PYRENE	UG/KG	420 U	430 UJ	ND	ND		0/5
BUTYL BENZYL PHTHALATE	UG/KG	420 U	430 U	ND	ND		0/5
3,3-DICHLOROBENZIDINE	UG/KG	420 U	430 U	ND	ND		0/5
BENZO(A)ANTHRACENE	UG/KG	420 U	430 U	ND	ND		0/5
CHRYSENE	UG/KG	420 U	430 U	ND	ND		0/5
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	420 U	430 U	47 J	92 J	69-NR2-SD-062	2/5
DI-N-OCTYL PHTHALATE	UG/KG	420 U	430 U	ND	ND		0/5
BENZO(B)FLUORANTHENE	UG/KG	420 U	430 U	ND	ND		0/5
BENZO(K)FLUORANTHENE	UG/KG	420 U	430 U	ND	ND		0/5
BENZO(A)PYRENE	UG/KG	420 U	430 U	ND	ND		0/5
INDENO(1,2,3-CD) PYRENE	UG/KG	420 U	430 U	ND	ND		0/5
DIBENZ(A,H)ANTHRACENE	UG/KG	420 U	430 U	ND	ND		0/5
BENZO(G,H,I)PERYLENE	UG/KG	420 U	430 U	ND	ND		0/5

**APPENDIX O.24**  
**SITE 69 NEW RIVER SEDIMENT INORGANICS**

---

SITE 69 NEW RIVER SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
	Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units					
ALUMINUM	MG/KG	16200	3450	5870	6360	8100
ANTIMONY	MG/KG	3.2 U	3.7 U	3.2 U	3.4 U	2.8 U
ARSENIC	MG/KG	2	2.7 U	5.6	1.6 B	3.2
BARIUM	MG/KG	12.5 B	5.7 U	6.3 U	5.2 B	4.6 B
BERYLLIUM	MG/KG	0.27 B	0.24 JB	0.37 JB	0.24 U	0.24 B
CADMIUM	MG/KG	0.53 BJ	0.5 U	1.1 JB	0.49 U	1.2 J
CALCIUM	MG/KG	376 B	525 JB	444 JB	388 B	380 B
CHROMIUM	MG/KG	17.7	6.2	10.9	9.8	13.2
COBALT	MG/KG	1.2 B	0.92 B	0.81 JB	0.58 B	1.2 B
COPPER	MG/KG	1.6 BJ	1.9 UJ	2.1 UJ	1.6 BJ	2.5 BJ
IRON	MG/KG	5450	4320 J	11600 J	7470	14500
LEAD	MG/KG	6	4.6 J	5.7 J	3.6	4.4
MAGNESIUM	MG/KG	1120 B	808 JB	856 JB	973 B	1040
MANGANESE	MG/KG	14.5 J	17.2	28.9	13.6 J	19.5
MERCURY	MG/KG	0.12 U	0.03 U	0.03 U	0.11 U	0.13 U
NICKEL	MG/KG	1.8 U	2.1 U	1.8 U	1.9 U	1.6 U
POTASSIUM	MG/KG	1040 B	614 B	698 B	919 U	1040 U
SELENIUM	MG/KG	0.87 U	0.97 U	1.3 U	1.2 U	1 U
SILVER	MG/KG	0.94 U	0.52 UJ	0.56 UJ	1.1 U	1 U
SODIUM	MG/KG	2280 J	1710 J	1240 J	1900 J	2560 J
THALLIUM	MG/KG	0.35 U	0.39 UJ	0.52 UJ	0.47 U	0.42 UJ
VANADIUM	MG/KG	35.3	10.3 B	25.4	12.5	18.1
ZINC	MG/KG	7	9.5 U	11.8 U	8.2	10.7

SITE 69 NEW RIVER SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Units	Sample No:	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		Depth: Date Sampled: Lab Id:	NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM DETECTED	OF DETECTION
ALUMINUM	MG/KG		NA	NA	3450	16200	69-NR1-SD-06	5/5
ANTIMONY	MG/KG		2.8 U	3.7 U	ND	ND		0/5
ARSENIC	MG/KG		2.7 U	2.7 U	1.6 B	5.6	69-NR2-SD-6122	4/5
BARIUM	MG/KG		5.7 U	6.3 U	4.6 B	12.5 B	69-NR1-SD-06	3/5
BERYLLIUM	MG/KG		0.24 U	0.24 U	0.24 JB	0.37 JB	69-NR2-SD-6122	4/5
CADMIUM	MG/KG		0.49 U	0.5 U	0.53 BJ	1.2 J	69-NR3-SD-612	3/5
CALCIUM	MG/KG		NA	NA	376 B	525 JB	69-NR2-SD-062	5/5
CHROMIUM	MG/KG		NA	NA	6.2	17.7	69-NR1-SD-06	5/5
COBALT	MG/KG		NA	NA	0.58 B	1.2 B	69-NR3-SD-612	5/5
COPPER	MG/KG		1.9 UJ	2.1 UJ	1.6 BJ	2.5 BJ	69-NR3-SD-612	3/5
IRON	MG/KG		NA	NA	4320 J	14500	69-NR3-SD-612	5/5
LEAD	MG/KG		NA	NA	3.6	6	69-NR1-SD-06	5/5
MAGNESIUM	MG/KG		NA	NA	808 JB	1120 B	69-NR1-SD-06	5/5
MANGANESE	MG/KG		NA	NA	13.6 J	28.9	69-NR2-SD-6122	5/5
MERCURY	MG/KG		0.03 U	0.13 U	ND	ND		0/5
NICKEL	MG/KG		1.6 U	2.1 U	ND	ND		0/5
POTASSIUM	MG/KG		919 U	1040 U	614 B	1040 B	69-NR3-SD-612	3/5
SELENIUM	MG/KG		0.87 U	1.3 U	ND	ND		0/5
SILVER	MG/KG		0.52 UJ	1.1 U	ND	ND		0/5
SODIUM	MG/KG		NA	NA	1240 J	2560 J	69-NR3-SD-612	5/5
THALLIUM	MG/KG		0.35 U	0.52 UJ	ND	ND		0/5
VANADIUM	MG/KG		NA	NA	10.3 B	35.3	69-NR1-SD-06	5/5
ZINC	MG/KG		9.5 U	11.8 U	7	10.7	69-NR3-SD-612	3/5

**APPENDIX O.25**  
**SITE 69 UNNAMED TRIBUTARY SEDIMENT ORGANICS**

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92
	Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09
Parameter	Units					
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
BETA-BHC	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
DELTA-BHC	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
GAMMA-BHC(LINDANE)	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
HEPTACHLOR	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
ALDRIN	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
HEPTACHLOR EPOXIDE	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
ENDOSULFAN I	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
DIELDRIN	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
4,4'-DDE	UG/KG	4.3 UJ	250	250	10 J	3.9 U
ENDRIN	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
ENDOSULFAN II	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
4,4'-DDD	UG/KG	14 J	150	150	6.2 UJ	3.9 U
ENDOSULFAN SULFATE	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
4,4'-DDT	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
METHOXYCHLOR	UG/KG	22 UJ	120 U	89 U	32 UJ	20 U
ENDRIN KETONE	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
ENDRIN ALDEHYDE	UG/KG	4.3 UJ	23 U	17 U	6.2 UJ	3.9 U
ALPHA CHLORDANE	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
GAMMA CHLORDANE	UG/KG	2.2 UJ	12 U	8.9 U	3.2 UJ	2 U
TOXAPHENE	UG/KG	220 UJ	1200 U	890 U	320 UJ	200 U
PCB-1016	UG/KG	43 UJ	230 U	170 U	62 UJ	39 U
PCB-1221	UG/KG	87 UJ	470 U	350 U	130 UJ	79 U
PCB-1232	UG/KG	43 UJ	230 U	170 U	62 UJ	39 U
PCB-1242	UG/KG	43 UJ	230 U	170 U	62 UJ	39 U
PCB-1248	UG/KG	43 UJ	230 U	170 U	62 UJ	39 U
PCB-1254	UG/KG	43 UJ	230 U	170 U	62 UJ	39 U
PCB-1260	UG/KG	43 UJ	230 U	170 U	62 UJ	360
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
BROMOMETHANE	UG/KG	12 U	77 U	33 U	19 UJ	21 UJ
VINYL CHLORIDE	UG/KG	12 U	77 U	33 U	19 U	21 U
CHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
METHYLENE CHLORIDE	UG/KG	12 U	77 U	33 U	19 U	21 U
ACETONE	UG/KG	39 J	370 UJ	86 UJ	41	65
CARBON DISULFIDE	UG/KG	12 U	88	25 J	18 J	46
1,1-DICHLOROETHENE	UG/KG	12 U	77 U	33 U	19 U	21 U
1,1-DICHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
1,2-DICHLOROETHENE	UG/KG	12 U	77 U	33 U	19 U	21 U
CHLOROFORM	UG/KG	12 U	77 UJ	33 UJ	19 U	21 U
1,2-DICHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
2-BUTANONE	UG/KG	12 U	77 U	33 U	19 U	21 U



SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92	
Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09	
Parameter	Units					
<u>VOLATILES (Continued)</u>						
1,1,1-TRICHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
CARBON TETRACHLORIDE	UG/KG	12 U	77 UJ	33 UJ	19 U	21 U
BROMODICHLOROMETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
1,2-DICHLOROPROPANE	UG/KG	12 U	77 U	33 U	19 U	21 U
CIS-1,3-DICHLOROPROPENE	UG/KG	12 U	77 U	33 U	19 U	21 U
TRICHLOROETHENE	UG/KG	12 U	77 U	33 U	19 U	21 U
DIBROMOCHLOROMETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
1,1,2-TRICHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
BENZENE	UG/KG	12 U	77 U	33 U	19 U	21 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	12 U	77 U	33 U	19 U	21 U
BROMOFORM	UG/KG	12 U	77 U	33 U	19 U	21 U
4-METHYL-2-PENTANONE	UG/KG	12 U	77 U	33 U	19 U	21 U
2-HEXANONE	UG/KG	12 U	77 U	33 U	19 U	21 U
TETRACHLOROETHENE	UG/KG	12 U	77 U	33 U	19 U	21 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	12 U	77 U	33 U	19 U	21 U
TOLUENE	UG/KG	2 J	77 U	33 U	19 U	21 U
CHLOROBENZENE	UG/KG	12 U	77 U	33 U	19 U	21 U
ETHYLBENZENE	UG/KG	12 U	77 U	33 U	19 U	21 U
STYRENE	UG/KG	12 U	77 U	33 U	19 U	21 U
TOTAL XYLENES	UG/KG	12 U	77 U	33 U	19 U	21 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2-CHLOROPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
1,3-DICHLOROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
1,4-DICHLOROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
1,2-DICHLOROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2-METHYLPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	430 U	2300 U	1700 U	620 UJ	390 UJ
4-METHYLPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	430 U	2300 U	1700 U	620 UJ	390 UJ
HEXACHLOROETHANE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
NITROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
ISOPHORONE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2-NITROPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4-DIMETHYLPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4-DICHLOROPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
1,2,4-TRICHLOROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
NAPHTHALENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
4-CHLORANILINE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
HEXACHLOROBUTADIENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92	
Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09	
Parameter	Units					
<u>SEMIVOLATILES (Continued)</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2-METHYLNAPHTHALENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4,6-TRICHLOROPHENOL	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4,5-TRICHLOROPHENOL	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
2-CHLORONAPHTHALENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2-NITROANILINE	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
DIMETHYL PHTHALATE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
ACENAPHTHYLENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,6-DINITROTOLUENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
3-NITROANILINE	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
ACENAPHTHENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4-DINITROPHENOL	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
4-NITROPHENOL	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
DIBENZOFURAN	UG/KG	430 U	2300 U	1700 U	620 U	390 U
2,4-DINITROTOLUENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
DIETHYL PHTHALATE	UG/KG	430 U	2300 U	500 J	620 U	390 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	430 U	2300 U	1700 U	620 U	390 U
FLUORENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
4-NITROANILINE	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
N-NITRISODIPHENYLAMINE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	430 U	2300 U	1700 U	620 U	390 U
HEXACHLOROBENZENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
PENTACHLOROPHENOL	UG/KG	1000 U	5700 U	4200 U	1500 U	950 U
PHENANTHRENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
ANTHRACENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
DI-N-BUTYL PHTHALATE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
FLUORANTHENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
CARBAZOLE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
PYRENE	UG/KG	430 U	2300 U	1700 U	620 UJ	390 UJ
BUTYL BENZYL PHTHALATE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
3,3-DICHLOROBENZIDINE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BENZO(A)ANTHRACENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
CHRYSENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	430 U	2300 U	1700 U	81 J	52 J
DI-N-OCTYL PHTHALATE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BENZO(B)FLUORANTHENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BENZO(K)FLUORANTHENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BENZO(A)PYRENE	UG/KG	430 U	290 J	2500	620 U	390 U
INDENO(1,2,3-CD) PYRENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
DIBENZ(A,H)ANTHRACENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U
BENZO(G,H,I)PERYLENE	UG/KG	430 U	2300 U	1700 U	620 U	390 U

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO--0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Units	Sample No:		Date Sampled:		LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
		Depth:	Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED		
<u>PESTICIDE/PCBs</u>							
ALPHA-BHC	UG/KG	2 U	12 U	ND	ND		0/5
BETA-BHC	UG/KG	2 U	12 U	ND	ND		0/5
DELTA-BHC	UG/KG	2 U	12 U	ND	ND		0/5
GAMMA-BHC(LINDANE)	UG/KG	2 U	12 U	ND	ND		0/5
HEPTACHLOR	UG/KG	2 U	12 U	ND	ND		0/5
ALDRIN	UG/KG	2 U	12 U	ND	ND		0/5
HEPTACHLOR EPOXIDE	UG/KG	2 U	12 U	ND	ND		0/5
ENDOSULFAN I	UG/KG	2 U	12 U	ND	ND		0/5
DIELDRIN	UG/KG	3.9 U	23 U	ND	ND		0/5
4,4'-DDE	UG/KG	3.9 U	4.3 UJ	10 J	250	69-UT2-SD-612	3/5
ENDRIN	UG/KG	3.9 U	23 U	ND	ND		0/5
ENDOSULFAN II	UG/KG	3.9 U	23 U	ND	ND		0/5
4,4'-DDD	UG/KG	3.9 U	6.2 UJ	14 J	150	69-UT2-SD-612	3/5
ENDOSULFAN SULFATE	UG/KG	3.9 U	23 U	ND	ND		0/5
4,4'-DDT	UG/KG	3.9 U	23 U	ND	ND		0/5
METHOXYCHLOR	UG/KG	20 U	120 U	ND	ND		0/5
ENDRIN KETONE	UG/KG	3.9 U	23 U	ND	ND		0/5
ENDRIN ALDEHYDE	UG/KG	3.9 U	23 U	ND	ND		0/5
ALPHA CHLORDANE	UG/KG	2 U	12 U	ND	ND		0/5
GAMMA CHLORDANE	UG/KG	2 U	12 U	ND	ND		0/5
TOXAPHENE	UG/KG	200 U	1200 U	ND	ND		0/5
PCB-1016	UG/KG	39 U	230 U	ND	ND		0/5
PCB-1221	UG/KG	79 U	470 U	ND	ND		0/5
PCB-1232	UG/KG	39 U	230 U	ND	ND		0/5
PCB-1242	UG/KG	39 U	230 U	ND	ND		0/5
PCB-1248	UG/KG	39 U	230 U	ND	ND		0/5
PCB-1254	UG/KG	39 U	230 U	ND	ND		0/5
PCB-1260	UG/KG	43 UJ	230 U	360	360	69-UT3-SD-6122	1/5
<u>VOLATILES</u>							
CHLOROMETHANE	UG/KG	12 U	77 U	ND	ND		0/5
BROMOMETHANE	UG/KG	12 U	77 U	ND	ND		0/5
VINYL CHLORIDE	UG/KG	12 U	77 U	ND	ND		0/5
CHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
METHYLENE CHLORIDE	UG/KG	12 U	77 U	ND	ND		0/5
ACETONE	UG/KG	86 UJ	370 UJ	39 J	65	69-UT3-SD-6122	3/5
CARBON DISULFIDE	UG/KG	12 U	12 U	18 J	88	69-UT2-SD-06	4/5
1,1-DICHLOROETHENE	UG/KG	12 U	77 U	ND	ND		0/5
1,1-DICHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
1,2-DICHLOROETHENE	UG/KG	12 U	77 U	ND	ND		0/5
CHLOROFORM	UG/KG	12 U	77 UJ	ND	ND		0/5
1,2-DICHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
2-BUTANONE	UG/KG	12 U	77 U	ND	ND		0/5

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units						
<u>VOLATILES (Continued)</u>							
1,1,1-TRICHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
CARBON TETRACHLORIDE	UG/KG	12 U	77 UJ	ND	ND		0/5
BROMODICHLOROMETHANE	UG/KG	12 U	77 U	ND	ND		0/5
1,2-DICHLOROPROPANE	UG/KG	12 U	77 U	ND	ND		0/5
CIS-1,3-DICHLOROPROPENE	UG/KG	12 U	77 U	ND	ND		0/5
TRICHLOROETHENE	UG/KG	12 U	77 U	ND	ND		0/5
DIBROMOCHLOROMETHANE	UG/KG	12 U	77 U	ND	ND		0/5
1,1,2-TRICHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
BENZENE	UG/KG	12 U	77 U	ND	ND		0/5
TRANS-1,3-DICHLOROPROPENE	UG/KG	12 U	77 U	ND	ND		0/5
BROMOFORM	UG/KG	12 U	77 U	ND	ND		0/5
4-METHYL-2-PENTANONE	UG/KG	12 U	77 U	ND	ND		0/5
2-HEXANONE	UG/KG	12 U	77 U	ND	ND		0/5
TETRACHLOROETHENE	UG/KG	12 U	77 U	ND	ND		0/5
1,1,2-TETRACHLOROETHANE	UG/KG	12 U	77 U	ND	ND		0/5
TOLUENE	UG/KG	19 U	77 U	2 J	2 J	69-UT1-SD-06	1/5
CHLOROBENZENE	UG/KG	12 U	77 U	ND	ND		0/5
ETHYLBENZENE	UG/KG	12 U	77 U	ND	ND		0/5
STYRENE	UG/KG	12 U	77 U	ND	ND		0/5
TOTAL XYLENES	UG/KG	12 U	77 U	ND	ND		0/5
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
BIS(2-CHLOROETHYL) ETHER	UG/KG	390 U	2300 U	ND	ND		0/5
2-CHLOROPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
1,3-DICHLOROBENZENE	UG/KG	390 U	2300 U	ND	ND		0/5
1,4-DICHLOROBENZENE	UG/KG	390 U	2300 U	ND	ND		0/5
1,2-DICHLOROBENZENE	UG/KG	390 U	2300 U	ND	ND		0/5
2-METHYLPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	390 UJ	2300 U	ND	ND		0/5
4-METHYLPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
N-NITROSODI-N-PROPYLAMINE	UG/KG	390 UJ	2300 U	ND	ND		0/5
HEXACHLOROETHANE	UG/KG	390 U	2300 U	ND	ND		0/5
NITROBENZENE	UG/KG	390 U	2300 U	ND	ND		0/5
ISOPHORONE	UG/KG	390 U	2300 U	ND	ND		0/5
2-NITROPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
2,4-DIMETHYLPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
BIS(2-CHLOROETHOXY) METHANE	UG/KG	390 U	2300 U	ND	ND		0/5
2,4-DICHLOROPHENOL	UG/KG	390 U	2300 U	ND	ND		0/5
1,2,4-TRICHLOROBENZENE	UG/KG	390 U	2300 U	ND	ND		0/5
NAPHTHALENE	UG/KG	390 U	2300 U	ND	ND		0/5
4-CHLORANILINE	UG/KG	390 U	2300 U	ND	ND		0/5
HEXACHLOROBUTADIENE	UG/KG	390 U	2300 U	ND	ND		0/5

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units					
<u>SEMIVOLATILES (Continued)</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	390 U	2300 U	ND	ND	0/5
2-METHYLNAPHTHALENE	UG/KG	390 U	2300 U	ND	ND	0/5
HEXACHLOROCYCLOPENTADIENE	UG/KG	390 U	2300 U	ND	ND	0/5
2,4,6-TRICHLOROPHENOL	UG/KG	390 U	2300 U	ND	ND	0/5
2,4,5-TRICHLOROPHENOL	UG/KG	950 U	5700 U	ND	ND	0/5
2-CHLORONAPHTHALENE	UG/KG	390 U	2300 U	ND	ND	0/5
2-NITROANILINE	UG/KG	950 U	5700 U	ND	ND	0/5
DIMETHYL PHTHALATE	UG/KG	390 U	2300 U	ND	ND	0/5
ACENAPHTHYLENE	UG/KG	390 U	2300 U	ND	ND	0/5
2,6-DINITROTOLUENE	UG/KG	390 U	2300 U	ND	ND	0/5
3-NITROANILINE	UG/KG	950 U	5700 U	ND	ND	0/5
ACENAPHTHENE	UG/KG	390 U	2300 U	ND	ND	0/5
2,4-DINITROPHENOL	UG/KG	950 U	5700 U	ND	ND	0/5
4-NITROPHENOL	UG/KG	950 U	5700 U	ND	ND	0/5
DIBENZOFURAN	UG/KG	390 U	2300 U	ND	ND	0/5
2,4-DINITROTOLUENE	UG/KG	390 U	2300 U	ND	ND	0/5
DIETHYL PHTHALATE	UG/KG	390 U	2300 U	500 J	500 J	69-UT2-SD-612 1/5
4-CHLOROPHENYL PHENYL ETHER	UG/KG	390 U	2300 U	ND	ND	0/5
FLUORENE	UG/KG	390 U	2300 U	ND	ND	0/5
4-NITROANILINE	UG/KG	950 U	5700 U	ND	ND	0/5
4,6-DINITRO-2-METHYLPHENOL	UG/KG	950 U	5700 U	ND	ND	0/5
N-NITRISODIPHENYLAMINE	UG/KG	390 U	2300 U	ND	ND	0/5
4-BROMOPHENYL PHENYL ETHER	UG/KG	390 U	2300 U	ND	ND	0/5
HEXACHLOROBENZENE	UG/KG	390 U	2300 U	ND	ND	0/5
PENTACHLOROPHENOL	UG/KG	950 U	5700 U	ND	ND	0/5
PHENANTHRENE	UG/KG	390 U	2300 U	ND	ND	0/5
ANTHRACENE	UG/KG	390 U	2300 U	ND	ND	0/5
DI-N-BUTYL PHTHALATE	UG/KG	390 U	2300 U	ND	ND	0/5
FLUORANTHENE	UG/KG	390 U	2300 U	ND	ND	0/5
CARBAZOLE	UG/KG	390 U	2300 U	ND	ND	0/5
PYRENE	UG/KG	390 UJ	2300 U	ND	ND	0/5
BUTYL BENZYL PHTHALATE	UG/KG	390 U	2300 U	ND	ND	0/5
3,3-DICHLOROBENZIDINE	UG/KG	390 U	2300 U	ND	ND	0/5
BENZO(A)ANTHRACENE	UG/KG	390 U	2300 U	ND	ND	0/5
CHRYSENE	UG/KG	390 U	2300 U	ND	ND	0/5
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	430 U	2300 U	52 J	81 J	69-UT3-SD-062 2/5
DI-N-OCTYL PHTHALATE	UG/KG	390 U	2300 U	ND	ND	0/5
BENZO(B)FLUORANTHENE	UG/KG	390 U	2300 U	ND	ND	0/5
BENZO(K)FLUORANTHENE	UG/KG	390 U	2300 U	ND	ND	0/5
BENZO(A)PYRENE	UG/KG	390 U	620 U	290 J	2500	69-UT2-SD-612 2/5
INDENO(1,2,3-CD) PYRENE	UG/KG	390 U	2300 U	ND	ND	0/5
DIBENZ(A,H)ANTHRACENE	UG/KG	390 U	2300 U	ND	ND	0/5
BENZO(G,H,I)PERYLENE	UG/KG	390 U	2300 U	ND	ND	0/5

**APPENDIX O.26**  
**SITE 69 UNNAMED TRIBUTARY SEDIMENT INORGANICS**

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	8/21/92	8/21/92	8/21/92	9/14/92	9/14/92
	Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09
Parameter	Units					
ALUMINUM	MG/KG	1240	16700	23400	11200	14500
ANTIMONY	MG/KG	9.4 U	13.6 UJ	13.3 UJ	5.5 U	5.1 U
ARSENIC	MG/KG	0.62 U	4.7 B	5.2 B	5.9	7.1
BARIUM	MG/KG	4 U	14.2 B	23.1 B	10.2 U	12.5 U
BERYLLIUM	MG/KG	0.19 U	0.97 U	0.95 U	0.52 JB	0.61 JB
CADMIUM	MG/KG	0.58 U	1.9 U	2.1 JB	2.1 J	1.8 JB
CALCIUM	MG/KG	264 B	6270	5750	1360 JB	1280 JB
CHROMIUM	MG/KG	3.3	15.8 U	25.5 U	17.7	22.4
COBALT	MG/KG	1.2 UJ	1.9 U	2.4 U	1.4 B	2.1 B
COPPER	MG/KG	1.5 UJ	22.8 B	24.1	7.2 B	8.5 B
CYANIDE	MG/KG	2.1 U				
IRON	MG/KG	3530	16200	17900	12100 J	15700 J
LEAD	MG/KG	1	32.8	34.1	12.8 J	19.4 J
MAGNESIUM	MG/KG	48.9 B	6660	6670	2600 J	3180 J
MANGANESE	MG/KG	2.9 J	54.4	69.3	27	26.6
MERCURY	MG/KG	0.11 U	0.54 U	0.48 U	0.06 U	0.05 U
NICKEL	MG/KG	3.3 U	7.8 U	7.6 U	3.1 U	2.9 U
POTASSIUM	MG/KG	81.1 B	2770 U	2740 U	1560 B	2040
SELENIUM	MG/KG	1 U	4.4 U	4.5 U	1.7 U	1.5 U
SILVER	MG/KG	1.9 U	4.3 U	6.4 U	1.4 UJ	1.4 UJ
SODIUM	MG/KG	122 JB	21100	16800	6740 J	7330 J
THALLIUM	MG/KG	0.42 UJ	1.8 UJ	1.8 UJ	0.69 UJ	0.59 UJ
VANADIUM	MG/KG	4 UJ	32.3 B	41.1 B	25.8	36.8
ZINC	MG/KG	4.4 U	61 U	55.8 U	22.4	24.6

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
TOTAL METALS

Parameter	Units	Sample No:	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		Depth:	NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM	OF
		Date Sampled:					DETECTED	DETECTION
		Lab Id:						
ALUMINUM	MG/KG		NA	NA	1240	23400	69-UT2-SD-612	5/5
ANTIMONY	MG/KG		5.1 U	13.6 UJ	ND	ND		0/5
ARSENIC	MG/KG		0.62 U	0.62 U	4.7 B	7.1	69-UT3-SD-6122	4/5
BARIUM	MG/KG		4 U	12.5 U	14.2 B	23.1 B	69-UT2-SD-612	2/5
BERYLLIUM	MG/KG		0.19 U	0.97 U	0.52 JB	0.61 JB	69-UT3-SD-6122	2/5
CADMIUM	MG/KG		0.58 U	1.9 U	1.8 JB	2.1 JB	69-UT3-SD-062	3/5
CALCIUM	MG/KG		NA	NA	264 B	6270	69-UT2-SD-06	5/5
CHROMIUM	MG/KG		15.8 U	25.5 U	3.3	22.4	69-UT3-SD-6122	3/5
COBALT	MG/KG		1.2 UJ	2.4 U	1.4 B	2.1 B	69-UT3-SD-6122	2/5
COPPER	MG/KG		1.5 UJ	1.5 UJ	7.2 B	24.1	69-UT2-SD-612	4/5
CYANIDE	MG/KG		2.1 U	2.1 U	ND	ND		0/1
IRON	MG/KG		NA	NA	3530	17900	69-UT2-SD-612	5/5
LEAD	MG/KG		NA	NA	1	34.1	69-UT2-SD-612	5/5
MAGNESIUM	MG/KG		NA	NA	48.9 B	6670	69-UT2-SD-612	5/5
MANGANESE	MG/KG		NA	NA	2.9 J	69.3	69-UT2-SD-612	5/5
MERCURY	MG/KG		0.05 U	0.54 U	ND	ND		0/5
NICKEL	MG/KG		2.9 U	7.8 U	ND	ND		0/5
POTASSIUM	MG/KG		2740 U	2770 U	81.1 B	2040	69-UT3-SD-6122	3/5
SELENIUM	MG/KG		1 U	4.5 U	ND	ND		0/5
SILVER	MG/KG		1.4 UJ	6.4 U	ND	ND		0/5
SODIUM	MG/KG		NA	NA	122 JB	21100	69-UT2-SD-06	5/5
THALLIUM	MG/KG		0.42 UJ	1.8 UJ	ND	ND		0/5
VANADIUM	MG/KG		4 UJ	4 UJ	25.8	41.1 B	69-UT2-SD-612	4/5
ZINC	MG/KG		4.4 U	61 U	22.4	24.6	69-UT3-SD-6122	2/5



**APPENDIX O.27**  
**SITE 69 ECOLOGICAL SAMPLES ORGANICS**

---

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
BETA-BHC	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
DELTA-BHC	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
GAMMA-BHC(LINDANE)	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
HEPTACHLOR	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
ALDRIN	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
HEPTACHLOR EPOXIDE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
ENDOSULFAN I	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
DIELDRIN	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
4,4'-DDE	UG/KG	9.9 J	12 J	8.2	7.9 J	12 J
ENDRIN	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
ENDOSULFAN II	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
4,4'-DDD	UG/KG	3.7 J	5.4 J	3.3 J	2 UJ	2.2 J
ENDOSULFAN SULFATE	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
4,4'-DDT	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
METHOXYCHLOR	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
ENDRIN KETONE	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
ENDRIN ALDEHYDE	UG/KG	2 UJ	2 UJ	2 U	2 UJ	2 UJ
ALPHA CHLORDANE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
GAMMA CHLORDANE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
TOXAPHENE	UG/KG	100 UJ	100 UJ	100 U	100 UJ	100 UJ
PCB-1016	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1221	UG/KG	40 UJ	40 UJ	40 U	40 UJ	40 UJ
PCB-1232	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1242	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1248	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1254	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1260	UG/KG	20 UJ	20 UJ	68	20 UJ	20 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
BROMOMETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
VINYL CHLORIDE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
CHLOROETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
METHYLENE CHLORIDE	UG/KG	69 J	10 UJ	9 J	28 J	8 J
ACETONE	UG/KG	370 J	1300 J	110	760 J	220 J
CARBON DISULFIDE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
1,1-DICHLOROETHENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
1,1-DICHLOROETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
1,2-DICHLOROETHENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
CHLOROFORM	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
1,2-DICHLOROETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
2-BUTANONE	UG/KG	10 UJ	10 UJ	18	10 UJ	10 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
CARBON TETRACHLORIDE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
BROMODICHLOROMETHANE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
1,2-DICHLOROPROPANE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
CIS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
TRICHLOROETHENE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
DIBROMOCHLOROMETHANE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
1,1,2-TRICHLOROETHANE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
BENZENE	UG/KG	2 J	11 J	2 J	79 J	10 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
BROMOFORM	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
4-METHYL-2-PENTANONE	UG/KG	10 U	10 UJ	10 U	10 UJ	10 U
2-HEXANONE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
TETRACHLOROETHENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
TOLUENE	UG/KG	10 UJ	6 J	1 J	39 J	1 J
CHLOROENZENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
ETHYLBENZENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
STYRENE	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
TOTAL XYLENES	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	50 U	49 U	49 U	49 U	49 U
2-CHLOROPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
1,3-DICHLOROBENZENE	UG/KG	50 U	49 U	49 U	49 U	49 U
1,4-DICHLOROBENZENE	UG/KG	50 U	49 U	49 U	49 U	49 U
1,2-DICHLOROBENZENE	UG/KG	50 U	49 U	49 U	49 U	49 U
2-METHYLPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	50 U	49 U	49 U	49 U	49 U
4-METHYLPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	50 U	49 U	49 U	49 U	49 U
HEXACHLOROETHANE	UG/KG	50 U	49 U	49 U	49 U	49 U
NITROBENZENE	UG/KG	50 U	49 U	49 U	49 U	49 U
ISOPHORONE	UG/KG	50 U	49 U	49 U	49 U	49 U
2-NITROPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4-DIMETHYLPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4-DICHLOROPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
1,2,4-TRICHLOROBENZENE	UG/KG	50 U	49 U	49 U	49 U	49 U
NAPHTHALENE	UG/KG	50 U	49 U	49 U	49 U	49 U
4-CHLORANILINE	UG/KG	50 U	49 U	49 U	49 U	49 U
HEXACHLOROBUTADIENE	UG/KG	50 U	49 U	49 U	49 U	49 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	50 UJ	49 UJ	49 U	49 UJ	49 U
2-METHYLNAPHTHALENE	UG/KG	50 U	49 U	49 U	49 U	49 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4,6-TRICHLOROPHENOL	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4,5-TRICHLOROPHENOL	UG/KG	120 U	120 U	120 U	120 U	120 U
2-CHLORONAPHTHALENE	UG/KG	50 U	49 U	49 U	49 U	49 U
2-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
DIMETHYL PHTHALATE	UG/KG	50 U	49 U	49 U	49 U	49 U
ACENAPHTHYLENE	UG/KG	50 U	49 U	49 U	49 U	49 U
2,6-DINITROTOLUENE	UG/KG	50 U	49 U	49 U	49 U	49 U
3-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
ACENAPHTHENE	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4-DINITROPHENOL	UG/KG	120 U	120 U	120 UJ	120 U	120 U
4-NITROPHENOL	UG/KG	120 U	120 UJ	120 U	120 U	120 U
DIBENZOFURAN	UG/KG	50 U	49 U	49 U	49 U	49 U
2,4-DINITROTOLUENE	UG/KG	50 U	49 U	49 UJ	49 U	49 U
DIETHYL PHTHALATE	UG/KG	50 U	49 U	49 U	49 U	49 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	50 U	49 U	49 U	49 U	49 U
FLUORENE	UG/KG	50 U	49 U	49 U	49 U	49 U
4-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	120 U	120 U	120 UJ	120 U	120 UJ
N-NITRISODIPHENYLAMINE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
4-BROMOPHENYL PHENYL ETHER	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
HEXACHLOROBENZENE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
PENTACHLOROPHENOL	UG/KG	120 U	120 U	120 UJ	120 U	120 UJ
PHENANTHRENE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
ANTHRACENE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
DI-N-BUTYL PHTHALATE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
FLUORANTHENE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
CARBAZOLE	UG/KG	50 U	49 U	49 UJ	49 U	49 UJ
PYRENE	UG/KG	50 UJ	49 U	49 UJ	49 UJ	49 UJ
BUTYL BENZYL PHTHALATE	UG/KG	50 UJ	49 U	49 UJ	49 UJ	49 UJ
3,3-DICHLOROBENZIDINE	UG/KG	50 UJ	49 U	49 UJ	49 UJ	49 UJ
BENZO(A)ANTHRACENE	UG/KG	50 UJ	49 U	49 UJ	49 UJ	49 UJ
CHRYSENE	UG/KG	50 UJ	49 U	49 UJ	49 UJ	49 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	380 UJ	82 U	190 UJ	90 UJ	68 UJ
DI-N-OCTYL PHTHALATE	UG/KG	50 UJ	49 UJ	120 J	49 UJ	49 UJ
BENZO(B)FLUORANTHENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ
BENZO(K)FLUORANTHENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ
BENZO(A)PYRENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ
BENZO(G,H,I)PERYLENE	UG/KG	50 UJ	49 UJ	49 UJ	49 UJ	49 UJ

SITE 69 ECOLOGICAL SAMPLES  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
	Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
	Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
	Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units						
<u>PESTICIDE/PCBS</u>							
ALPHA-BHC	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
BETA-BHC	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
DELTA-BHC	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
GAMMA-BHC(LINDANE)	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
HEPTACHLOR	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
ALDRIN	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
HEPTACHLOR EPOXIDE	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
ENDOSULFAN I	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
DIELDRIN	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
4,4'-DDE	UG/KG	280	4.2 J	6.9 J	12 J	16 J	4
ENDRIN	UG/KG	39 J	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
ENDOSULFAN II	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
4,4'-DDD	UG/KG	150 J	1.9 J	6.4 J	2.3 J	6.3 J	1.9 U
ENDOSULFAN SULFATE	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
4,4'-DDT	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
METHOXYCHLOR	UG/KG	50 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U
ENDRIN KETONE	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
ENDRIN ALDEHYDE	UG/KG	9.8 U	2 UJ	2 UJ	2 UJ	1.9 UJ	1.9 U
ALPHA CHLORDANE	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
GAMMA CHLORDANE	UG/KG	5 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
TOXAPHENE	UG/KG	500 U	100 UJ	100 UJ	100 UJ	100 UJ	100 U
PCB-1016	UG/KG	98 U	20 UJ	20 UJ	20 UJ	19 UJ	19 U
PCB-1221	UG/KG	200 U	40 UJ	40 UJ	40 UJ	39 UJ	39 U
PCB-1232	UG/KG	98 U	20 UJ	20 UJ	20 UJ	19 UJ	19 U
PCB-1242	UG/KG	98 U	20 UJ	20 UJ	20 UJ	19 UJ	19 U
PCB-1248	UG/KG	98 U	20 UJ	20 UJ	20 UJ	19 UJ	19 U
PCB-1254	UG/KG	340 J	20 UJ	20 UJ	20 UJ	19 UJ	19 U
PCB-1260	UG/KG	98 U	20 UJ	20 UJ	20 UJ	19 UJ	19 U
<u>VOLATILES</u>							
CHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
BROMOMETHANE	UG/KG	10 UJ	10 U	10 U	10 U	10 UJ	10 U
VINYL CHLORIDE	UG/KG	10 U	10 U	10 U	10 UJ	10 UJ	10 U
CHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
METHYLENE CHLORIDE	UG/KG	7 J	6 J	18	8 J	10 UJ	12
ACETONE	UG/KG	10 U	10 U	42	66	410 J	460 J
CARBON DISULFIDE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,1-DICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 UJ	10 UJ	10 U
1,1-DICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,2-DICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
CHLOROFORM	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,2-DICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
2-BUTANONE	UG/KG	19	10	10 U	7 J	49 J	35 J

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
	Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
	Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
	Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units						
<u>VOLATILES Cont.</u>							
1,1,1-TRICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
CARBON TETRACHLORIDE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
BROMODICHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,2-DICHLOROPROPANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
CIS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
TRICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
DIBROMOCHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,1,2-TRICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
BENZENE	UG/KG	10 U	10 U	10 U	10 U	36 J	2 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
BROMOFORM	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
4-METHYL-2-PENTANONE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
2-HEXANONE	UG/KG	38	73	16	10 U	10 UJ	10 UJ
TETRACHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 UJ
TOLUENE	UG/KG	10 U	10 U	10 U	10 U	13 J	14 J
CHLOROBENZENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 UJ
ETHYLBENZENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 UJ
STYRENE	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 UJ
TOTAL XYLENES	UG/KG	10 U	10 U	10 U	10 U	10 UJ	10 UJ
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
2-CHLOROPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
1,3-DICHLOROBENZENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
1,4-DICHLOROBENZENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
1,2-DICHLOROBENZENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
2-METHYLPHENOL	UG/KG	49 U	49 U	49 U	48 U	220	49 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
4-METHYLPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
HEXACHLOROETHANE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
NITROBENZENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
ISOPHORONE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
2-NITROPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
2,4-DIMETHYLPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
2,4-DICHLOROPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
1,2,4-TRICHLOROBENZENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
NAPHTHALENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
4-CHLORANILINE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U
HEXACHLOROBUTADIENE	UG/KG	49 U	49 U	49 U	48 U	49 U	49 U

SITE 69 ECOLOGICAL SAMPLES  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U
2-METHYLNAPHTHALENE	UG/KG	49 U	49 U	49 U	48 U	49 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	49 U	49 U	49 U	48 U	49 U
2,4,6-TRICHLOROPHENOL	UG/KG	49 U	49 U	49 U	48 U	49 U
2,4,5-TRICHLOROPHENOL	UG/KG	120 U	120 U	120 U	120 U	120 U
2-CHLORONAPHTHALENE	UG/KG	49 U	49 U	49 U	48 U	49 U
2-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
DIMETHYL PHTHALATE	UG/KG	49 U	49 U	49 U	48 U	49 U
ACENAPHTHYLENE	UG/KG	49 U	49 U	49 U	48 U	49 U
2,6-DINITROTOLUENE	UG/KG	49 U	49 U	49 U	48 U	49 U
3-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
ACENAPHTHENE	UG/KG	49 U	49 U	49 U	48 U	49 U
2,4-DINITROPHENOL	UG/KG	120 U	120 U	120 U	120 UJ	120 U
4-NITROPHENOL	UG/KG	120 U	120 U	120 U	120 U	120 U
DIBENZOFURAN	UG/KG	49 U	49 U	49 U	48 U	49 U
2,4-DINITROTOLUENE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
DIETHYL PHTHALATE	UG/KG	49 U	49 U	49 U	48 U	49 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	49 U	49 U	49 U	48 U	49 U
FLUORENE	UG/KG	49 U	49 U	49 U	48 U	49 U
4-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	120 U	120 U	120 U	120 UJ	120 U
N-NITRISODIPHENYLAMINE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	49 U	49 U	49 U	48 UJ	49 U
HEXACHLOROBENZENE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
PENTACHLOROPHENOL	UG/KG	120 U	120 U	120 U	120 UJ	120 U
PHENANTHRENE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
ANTHRACENE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
DI-N-BUTYL PHTHALATE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
FLUORANTHENE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
CARBAZOLE	UG/KG	49 U	49 U	49 U	48 UJ	49 U
PYRENE	UG/KG	49 U	49 U	49 U	48 UJ	49 UJ
BUTYL BENZYL PHTHALATE	UG/KG	49 U	49 U	49 U	48 UJ	49 UJ
3,3-DICHLOROBENZIDINE	UG/KG	49 U	49 U	49 U	48 UJ	49 UJ
BENZO(A)ANTHRACENE	UG/KG	49 U	49 U	49 U	48 UJ	49 UJ
CHRYSENE	UG/KG	49 U	49 U	49 U	48 UJ	49 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	54 U	49 U	160 U	260 UJ	140 U
DI-N-OCTYL PHTHALATE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
BENZO(B)FLUORANTHENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
BENZO(K)FLUORANTHENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
BENZO(A)PYRENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ
BENZO(G,H,I)PERYLENE	UG/KG	49 UJ	49 U	49 U	48 UJ	49 UJ

SITE 69 ECOLOGICAL SAMPLES  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
BETA-BHC	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
DELTA-BHC	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
GAMMA-BHC(LINDANE)	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
HEPTACHLOR	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
ALDRIN	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
HEPTACHLOR EPOXIDE	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
ENDOSULFAN I	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
DIELDRIN	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
4,4'-DDE	UG/KG	11 J	2.5 J	7.8 J	3.2	2.6 J
ENDRIN	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
ENDOSULFAN II	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
4,4'-DDD	UG/KG	3.5 J	2 U	3.6 J	1.9 U	2 UJ
ENDOSULFAN SULFATE	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
4,4'-DDT	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
METHOXYCHLOR	UG/KG	10 UJ	10 U	10 UJ	10 U	10 UJ
ENDRIN KETONE	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
ENDRIN ALDEHYDE	UG/KG	2 UJ	2 U	2 UJ	1.9 U	2 UJ
ALPHA CHLORDANE	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
GAMMA CHLORDANE	UG/KG	1 UJ	1 U	1 UJ	1 U	1 UJ
TOXAPHENE	UG/KG	100 UJ	100 U	100 UJ	100 U	100 UJ
PCB-1016	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
PCB-1221	UG/KG	40 UJ	40 U	40 UJ	39 U	40 UJ
PCB-1232	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
PCB-1242	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
PCB-1248	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
PCB-1254	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
PCB-1260	UG/KG	20 UJ	20 U	20 UJ	19 U	20 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
BROMOMETHANE	UG/KG	10 UJ	10 U	10 U	10 U	10 U
VINYL CHLORIDE	UG/KG	10 U	10 U	10 U	10 U	10 U
CHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
METHYLENE CHLORIDE	UG/KG	4 J	10 U	3 J	20	10 U
ACETONE	UG/KG	10 U	24	15	450 J	20
CARBON DISULFIDE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,1-DICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,1-DICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 U
CHLOROFORM	UG/KG	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
2-BUTANONE	UG/KG	10 U	10 U	10 U	27	10 U



SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
CARBON TETRACHLORIDE	UG/KG	10 U	10 U	10 U	10 U	10 U
BROMODICHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROPROPANE	UG/KG	10 U	10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	10 U	10 U	10 U
TRICHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 U
DIBROMOCHLOROMETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,1,2-TRICHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
BENZENE	UG/KG	10 U	10 U	10 U	3 J	2 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	10 U	10 U	10 U
BROMOFORM	UG/KG	10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	UG/KG	10 U	10 U	10 U	10 U	10 U
2-HEXANONE	UG/KG	10 U	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	UG/KG	10 U	10 U	10 U	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	10 U	10 U	10 U	10 U	10 U
TOLUENE	UG/KG	10 U	10 U	10 U	2 J	10 U
CHLOROBENZENE	UG/KG	10 U	10 U	10 U	10 U	10 U
ETHYLBENZENE	UG/KG	10 U	10 U	10 U	10 U	10 U
STYRENE	UG/KG	10 U	10 U	10 U	10 U	10 U
TOTAL XYLENES	UG/KG	10 U	10 U	10 U	10 U	10 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	48 U	49 U	49 U	49 U	50 U
2-CHLOROPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
1,3-DICHLOROBENZENE	UG/KG	48 U	49 U	49 U	49 U	50 U
1,4-DICHLOROBENZENE	UG/KG	48 U	49 U	49 U	49 U	50 U
1,2-DICHLOROBENZENE	UG/KG	48 U	49 U	49 U	49 U	50 U
2-METHYLPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	48 U	49 U	49 U	49 U	50 U
4-METHYLPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	48 U	49 U	49 U	49 U	50 U
HEXACHLOROETHANE	UG/KG	48 U	49 U	49 U	49 U	50 U
NITROBENZENE	UG/KG	48 U	49 U	49 U	49 U	50 U
ISOPHORONE	UG/KG	48 U	49 U	49 U	49 U	50 U
2-NITROPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
2,4-DIMETHYLPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	48 U	49 U	49 U	49 U	50 U
2,4-DICHLOROPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U
1,2,4-TRICHLOROBENZENE	UG/KG	48 U	49 U	49 U	49 U	50 U
NAPHTHALENE	UG/KG	48 U	49 U	49 U	49 U	50 U
4-CHLORANILINE	UG/KG	48 U	49 U	49 U	49 U	50 U
HEXACHLOROBUTADIENE	UG/KG	48 U	49 U	49 U	49 U	50 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO -0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
	Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
	Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
	Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units						
<u>SEMIVOLATILES Cont.</u>							
4-CHLORO-3-METHYLPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2-METHYLNAPHTHALENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2,4,6-TRICHLOROPHENOL	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2,4,5-TRICHLOROPHENOL	UG/KG	120 U	120 U	120 U	120 U	120 U	120 U
2-CHLORONAPHTHALENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U	120 U
DIMETHYL PHTHALATE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
ACENAPHTHYLENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2,6-DINITROTOLUENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
3-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U	120 U
ACENAPHTHENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2,4-DINITROPHENOL	UG/KG	120 UJ	120 U	120 U	120 U	120 U	120 U
4-NITROPHENOL	UG/KG	120 U	120 U	120 U	120 U	120 U	120 U
DIBENZOFURAN	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
2,4-DINITROTOLUENE	UG/KG	48 UJ	49 U	49 U	49 U	50 U	50 U
DIETHYL PHTHALATE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
FLUORENE	UG/KG	48 U	49 U	49 U	49 U	50 U	50 U
4-NITROANILINE	UG/KG	120 U	120 U	120 U	120 U	120 U	120 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	120 UJ	120 U	120 U	120 U	120 UJ	120 U
N-NITRISODIPHENYLAMINE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
HEXACHLOROBENZENE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
PENTACHLOROPHENOL	UG/KG	120 UJ	120 U	120 U	120 U	120 UJ	120 U
PHENANTHRENE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
ANTHRACENE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
DI-N-BUTYL PHTHALATE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
FLUORANTHENE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
CARBAZOLE	UG/KG	48 UJ	49 U	49 U	49 U	50 UJ	50 U
PYRENE	UG/KG	48 UJ	49 U	49 U	49 UJ	50 UJ	50 U
BUTYL BENZYL PHTHALATE	UG/KG	48 UJ	49 U	49 U	49 UJ	50 UJ	50 U
3,3-DICHLOROBENZIDINE	UG/KG	48 UJ	49 U	49 U	49 UJ	50 UJ	50 U
BENZO(A)ANTHRACENE	UG/KG	48 UJ	49 U	49 U	49 UJ	50 UJ	50 U
CHRYSENE	UG/KG	48 UJ	49 U	49 U	49 UJ	50 UJ	50 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	980 UJ	520 U	570 U	470 UJ	50 UJ	50 UJ
DI-N-OCTYL PHTHALATE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
BENZO(B)FLUORANTHENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
BENZO(K)FLUORANTHENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
BENZO(A)PYRENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ
BENZO(G,H,I)PERYLENE	UG/KG	48 UJ	49 UJ	49 UJ	49 UJ	50 UJ	50 UJ

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units		
<u>PESTICIDE/PCBS</u>			
ALPHA-BHC	UG/KG	1 UJ	1 UJ
BETA-BHC	UG/KG	1 UJ	1 UJ
DELTA-BHC	UG/KG	1 UJ	1 UJ
GAMMA-BHC(LINDANE)	UG/KG	1 UJ	1 UJ
HEPTACHLOR	UG/KG	1 UJ	1 UJ
ALDRIN	UG/KG	1 UJ	1 UJ
HEPTACHLOR EPOXIDE	UG/KG	1 UJ	1 UJ
ENDOSULFAN I	UG/KG	1 UJ	1 UJ
DIELDRIN	UG/KG	2 UJ	2 UJ
4,4'-DDE	UG/KG	3.7 J	3.3 J
ENDRIN	UG/KG	2 UJ	2 UJ
ENDOSULFAN II	UG/KG	2 UJ	2 UJ
4,4'-DDD	UG/KG	2 UJ	2 UJ
ENDOSULFAN SULFATE	UG/KG	2 UJ	2 UJ
4,4'-DDT	UG/KG	2 UJ	2 UJ
METHOXYCHLOR	UG/KG	10 UJ	10 UJ
ENDRIN KETONE	UG/KG	2 UJ	2 UJ
ENDRIN ALDEHYDE	UG/KG	2 UJ	2 UJ
ALPHA CHLORDANE	UG/KG	1 UJ	1 UJ
GAMMA CHLORDANE	UG/KG	1 UJ	1 UJ
TOXAPHENE	UG/KG	100 UJ	100 UJ
PCB-1016	UG/KG	20 UJ	20 UJ
PCB-1221	UG/KG	40 UJ	40 UJ
PCB-1232	UG/KG	20 UJ	20 UJ
PCB-1242	UG/KG	20 UJ	20 UJ
PCB-1248	UG/KG	20 UJ	20 UJ
PCB-1254	UG/KG	20 UJ	20 UJ
PCB-1260	UG/KG	20 UJ	20 UJ
<u>VOLATILES</u>			
CHLOROMETHANE	UG/KG		10 UJ
BROMOMETHANE	UG/KG		10 UJ
VINYL CHLORIDE	UG/KG		10 UJ
CHLOROETHANE	UG/KG		10 UJ
METHYLENE CHLORIDE	UG/KG		10 UJ
ACETONE	UG/KG		200 J
CARBON DISULFIDE	UG/KG		10 UJ
1,1-DICHLOROETHENE	UG/KG		10 UJ
1,1-DICHLOROETHANE	UG/KG		10 UJ
1,2-DICHLOROETHENE	UG/KG		10 UJ
CHLOROFORM	UG/KG		10 UJ
1,2-DICHLOROETHANE	UG/KG		10 UJ
2-BUTANONE	UG/KG		10 UJ

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units	
<u>VOLATILES Cont.</u>		
1,1,1-TRICHLOROETHANE	UG/KG	10 UJ
CARBON TETRACHLORIDE	UG/KG	10 UJ
BROMODICHLOROMETHANE	UG/KG	10 UJ
1,2-DICHLOROPROPANE	UG/KG	10 UJ
CIS-1,3-DICHLOROPROPENE	UG/KG	10 UJ
TRICHLOROETHENE	UG/KG	10 UJ
DIBROMOCHLOROMETHANE	UG/KG	10 UJ
1,1,2-TRICHLOROETHANE	UG/KG	10 UJ
BENZENE	UG/KG	22 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	10 UJ
BROMOFORM	UG/KG	10 UJ
4-METHYL-2-PENTANONE	UG/KG	10 UJ
2-HEXANONE	UG/KG	10 UJ
TETRACHLOROETHENE	UG/KG	10 UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	10 UJ
TOLUENE	UG/KG	9 J
CHLOROBENZENE	UG/KG	10 UJ
ETHYLBENZENE	UG/KG	10 UJ
STYRENE	UG/KG	10 UJ
TOTAL XYLENES	UG/KG	10 UJ
<u>SEMIVOLATILES</u>		
PHENOL	UG/KG	50 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	50 U
2-CHLOROPHENOL	UG/KG	50 U
1,3-DICHLOROBENZENE	UG/KG	50 U
1,4-DICHLOROBENZENE	UG/KG	50 U
1,2-DICHLOROBENZENE	UG/KG	50 U
2-METHYLPHENOL	UG/KG	50 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	50 U
4-METHYLPHENOL	UG/KG	50 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	50 U
HEXACHLOROETHANE	UG/KG	50 U
NITROBENZENE	UG/KG	50 U
ISOPHORONE	UG/KG	50 U
2-NITROPHENOL	UG/KG	50 U
2,4-DIMETHYLPHENOL	UG/KG	50 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	50 U
2,4-DICHLOROPHENOL	UG/KG	50 U
1,2,4-TRICHLOROBENZENE	UG/KG	50 U
NAPHTHALENE	UG/KG	50 U
4-CHLORANILINE	UG/KG	50 U
HEXACHLOROBUTADIENE	UG/KG	50 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units	
<u>SEMIVOLATILES Cont.</u>		
4-CHLORO-3-METHYLPHENOL	UG/KG	50 U
2-METHYLNAPHTHALENE	UG/KG	50 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	50 U
2,4,6-TRICHLOROPHENOL	UG/KG	50 U
2,4,5-TRICHLOROPHENOL	UG/KG	120 U
2-CHLORONAPHTHALENE	UG/KG	50 U
2-NITROANILINE	UG/KG	120 U
DIMETHYL PHTHALATE	UG/KG	50 U
ACENAPHTHYLENE	UG/KG	50 U
2,6-DINITROTOLUENE	UG/KG	50 U
3-NITROANILINE	UG/KG	120 U
ACENAPHTHENE	UG/KG	50 U
2,4-DINITROPHENOL	UG/KG	120 U
4-NITROPHENOL	UG/KG	120 U
DIBENZOFURAN	UG/KG	50 U
2,4-DINITROTOLUENE	UG/KG	50 U
DIETHYL PHTHALATE	UG/KG	50 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	50 U
FLUORENE	UG/KG	50 U
4-NITROANILINE	UG/KG	120 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	120 U
N-NITRISODIPHENYLAMINE	UG/KG	50 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	50 U
HEXACHLOROBENZENE	UG/KG	50 U
PENTACHLOROPHENOL	UG/KG	120 U
PHENANTHRENE	UG/KG	50 U
ANTHRACENE	UG/KG	50 U
DI-N-BUTYL PHTHALATE	UG/KG	50 U
FLUORANTHENE	UG/KG	50 U
CARBAZOLE	UG/KG	50 U
PYRENE	UG/KG	50 U
BUTYL BENZYL PHTHALATE	UG/KG	50 U
3,3-DICHLOROBENZIDINE	UG/KG	50 U
BENZO(A)ANTHRACENE	UG/KG	50 U
CHRYSENE	UG/KG	50 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	73 U
DI-N-OCTYL PHTHALATE	UG/KG	50 U
BENZO(B)FLUORANTHENE	UG/KG	50 U
BENZO(K)FLUORANTHENE	UG/KG	50 U
BENZO(A)PYRENE	UG/KG	50 U
INDENO(1,2,3-CD) PYRENE	UG/KG	50 U
DIBENZ(A,H)ANTHRACENE	UG/KG	50 U
BENZO(G,H,I)PERYLENE	UG/KG	50 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	1 UJ	5 U	ND	ND	0/20
BETA-BHC	UG/KG	1 UJ	5 U	ND	ND	0/20
DELTA-BHC	UG/KG	1 UJ	5 U	ND	ND	0/20
GAMMA-BHC(LINDANE)	UG/KG	1 UJ	5 U	ND	ND	0/20
HEPTACHLOR	UG/KG	1 UJ	5 U	ND	ND	0/20
ALDRIN	UG/KG	1 UJ	5 U	ND	ND	0/20
HEPTACHLOR EPOXIDE	UG/KG	1 UJ	5 U	ND	ND	0/20
ENDOSULFAN I	UG/KG	1 UJ	5 U	ND	ND	0/20
DIELDRIN	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
4,4'-DDE	UG/KG	2 UJ	2 UJ	2.5 J	280	69-EC4-SM1 19/20
ENDRIN	UG/KG	1.9 UJ	2 UJ	39 J	39 J	69-EC4-SM1 1/20
ENDOSULFAN II	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
4,4'-DDD	UG/KG	1.9 U	2 UJ	1.9 J	150 J	69-EC4-SM1 12/20
ENDOSULFAN SULFATE	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
4,4'-DDT	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
METHOXYCHLOR	UG/KG	10 UJ	50 U	ND	ND	0/20
ENDRIN KETONE	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
ENDRIN ALDEHYDE	UG/KG	1.9 UJ	9.8 U	ND	ND	0/20
ALPHA CHLORDANE	UG/KG	1 UJ	5 U	ND	ND	0/20
GAMMA CHLORDANE	UG/KG	1 UJ	5 U	ND	ND	0/20
TOXAPHENE	UG/KG	100 UJ	500 U	ND	ND	0/20
PCB-1016	UG/KG	19 UJ	98 U	ND	ND	0/20
PCB-1221	UG/KG	39 UJ	200 U	ND	ND	0/20
PCB-1232	UG/KG	19 UJ	98 U	ND	ND	0/20
PCB-1242	UG/KG	19 UJ	98 U	ND	ND	0/20
PCB-1248	UG/KG	19 UJ	98 U	ND	ND	0/20
PCB-1254	UG/KG	19 UJ	20 UJ	340 J	340 J	69-EC4-SM1 1/20
PCB-1260	UG/KG	19 UJ	98 U	68	68	69-EC4-CR 1/20
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
BROMOMETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
VINYL CHLORIDE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
CHLOROETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
METHYLENE CHLORIDE	UG/KG	10 UJ	10 UJ	3 J	69 J	69-EC3-BC 13/19
ACETONE	UG/KG	10 U	10 U	15	1300 J	69-EC3-FL 15/19
CARBON DISULFIDE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
1,1-DICHLOROETHENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
1,1-DICHLOROETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
1,2-DICHLOROETHENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
CHLOROFORM	UG/KG	10 UJ	10 UJ	ND	ND	0/19
1,2-DICHLOROETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
2-BUTANONE	UG/KG	10 UJ	10 UJ	7 J	49 J	69-NR2-AM 8/19

SITE 69 ECOLOGICAL SAMPLES  
DATA AND FREQUENCY SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	10 U	10 U	ND	ND	0/19
CARBON TETRACHLORIDE	UG/KG	10 U	10 U	ND	ND	0/19
BROMODICHLOROMETHANE	UG/KG	10 U	10 U	ND	ND	0/19
1,2-DICHLOROPROPANE	UG/KG	10 U	10 U	ND	ND	0/19
CIS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	ND	ND	0/19
TRICHLOROETHENE	UG/KG	10 U	10 U	ND	ND	0/19
DIBROMOCHLOROMETHANE	UG/KG	10 U	10 U	ND	ND	0/19
1,1,2-TRICHLOROETHANE	UG/KG	10 U	10 U	ND	ND	0/19
BENZENE	UG/KG	10 U	10 U	2 J	79 J	69-EC4-FL1 9/19
TRANS-1,3-DICHLOROPROPENE	UG/KG	10 U	10 U	ND	ND	0/19
BROMOFORM	UG/KG	10 U	10 U	ND	ND	0/19
4-METHYL-2-PENTANONE	UG/KG	10 U	10 U	ND	ND	0/19
2-HEXANONE	UG/KG	10 UJ	10 UJ	16	73	69-NR1-AM 3/19
TETRACHLOROETHENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
1,1,2,2-TETRACHLOROETHANE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
TOLUENE	UG/KG	10 UJ	10 UJ	1 J	39 J	69-EC4-FL1 8/19
CHLOROENZENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
ETHYLBENZENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
STYRENE	UG/KG	10 UJ	10 UJ	ND	ND	0/19
TOTAL XYLENES	UG/KG	10 UJ	10 UJ	ND	ND	0/19
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	48 U	50 U	ND	ND	0/19
BIS(2-CHLOROETHYL) ETHER	UG/KG	48 U	50 U	ND	ND	0/19
2-CHLOROPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
1,3-DICHLOROBENZENE	UG/KG	48 U	50 U	ND	ND	0/19
1,4-DICHLOROBENZENE	UG/KG	48 U	50 U	ND	ND	0/19
1,2-DICHLOROBENZENE	UG/KG	48 U	50 U	ND	ND	0/19
2-METHYLPHENOL	UG/KG	48 U	50 U	220	220	69-NR2-AM 1/19
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	48 U	50 U	ND	ND	0/19
4-METHYLPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
N-NITROSODI-N-PROPYLAMINE	UG/KG	48 U	50 U	ND	ND	0/19
HEXACHLOROETHANE	UG/KG	48 U	50 U	ND	ND	0/19
NITROBENZENE	UG/KG	48 U	50 U	ND	ND	0/19
ISOPHORONE	UG/KG	48 U	50 U	ND	ND	0/19
2-NITROPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
2,4-DIMETHYLPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
BIS(2-CHLOROETHOXY) METHANE	UG/KG	48 U	50 U	ND	ND	0/19
2,4-DICHLOROPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
1,2,4-TRICHLOROBENZENE	UG/KG	48 U	50 U	ND	ND	0/19
NAPHTHALENE	UG/KG	48 U	50 U	ND	ND	0/19
4-CHLORANILINE	UG/KG	48 U	50 U	ND	ND	0/19
HEXACHLOROBUTADIENE	UG/KG	48 U	50 U	ND	ND	0/19

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No: Depth: Date Sampled: Lab Id:	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	48 U	50 UJ	ND	ND	0/19
2-METHYLNAPHTHALENE	UG/KG	48 U	50 U	ND	ND	0/19
HEXACHLOROCYCLOPENTADIENE	UG/KG	48 U	50 U	ND	ND	0/19
2,4,6-TRICHLOROPHENOL	UG/KG	48 U	50 U	ND	ND	0/19
2,4,5-TRICHLOROPHENOL	UG/KG	120 U	120 U	ND	ND	0/19
2-CHLORONAPHTHALENE	UG/KG	48 U	50 U	ND	ND	0/19
2-NITROANILINE	UG/KG	120 U	120 U	ND	ND	0/19
DIMETHYL PHTHALATE	UG/KG	48 U	50 U	ND	ND	0/19
ACENAPHTHYLENE	UG/KG	48 U	50 U	ND	ND	0/19
2,6-DINITROTOLUENE	UG/KG	48 U	50 U	ND	ND	0/19
3-NITROANILINE	UG/KG	120 U	120 U	ND	ND	0/19
ACENAPHTHENE	UG/KG	48 U	50 U	ND	ND	0/19
2,4-DINITROPHENOL	UG/KG	120 U	120 U	ND	ND	0/19
4-NITROPHENOL	UG/KG	120 U	120 U	ND	ND	0/19
DIBENZOFURAN	UG/KG	48 U	50 U	ND	ND	0/19
2,4-DINITROTOLUENE	UG/KG	48 UJ	50 U	ND	ND	0/19
DIETHYL PHTHALATE	UG/KG	48 U	50 U	ND	ND	0/19
4-CHLOROPHENYL PHENYL ETHER	UG/KG	48 U	50 U	ND	ND	0/19
FLUORENE	UG/KG	48 U	50 U	ND	ND	0/19
4-NITROANILINE	UG/KG	120 U	120 U	ND	ND	0/19
4,6-DINITRO-2-METHYLPHENOL	UG/KG	120 U	120 U	ND	ND	0/19
N-NITRISODIPHENYLAMINE	UG/KG	48 UJ	50 U	ND	ND	0/19
4-BROMOPHENYL PHENYL ETHER	UG/KG	48 UJ	50 U	ND	ND	0/19
HEXACHLOROBENZENE	UG/KG	48 UJ	50 U	ND	ND	0/19
PENTACHLOROPHENOL	UG/KG	120 U	120 U	ND	ND	0/19
PHENANTHRENE	UG/KG	48 UJ	50 U	ND	ND	0/19
ANTHRACENE	UG/KG	48 UJ	50 U	ND	ND	0/19
DI-N-BUTYL PHTHALATE	UG/KG	48 UJ	50 U	ND	ND	0/19
FLUORANTHENE	UG/KG	48 UJ	50 U	ND	ND	0/19
CARBAZOLE	UG/KG	48 UJ	50 U	ND	ND	0/19
PYRENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BUTYL BENZYL PHTHALATE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
3,3-DICHLOROBENZIDINE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BENZO(A)ANTHRACENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
CHRYSENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	49 UJ	980 UJ	ND	ND	0/19
DI-N-OCTYL PHTHALATE	UG/KG	48 UJ	50 UJ	120 J	120 J	69-EC4-CR 1/19
BENZO(B)FLUORANTHENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BENZO(K)FLUORANTHENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BENZO(A)PYRENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
INDENO(1,2,3-CD) PYRENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
DIBENZ(AH)ANTHRACENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19
BENZO(G,H,I)PERYLENE	UG/KG	48 UJ	50 UJ	ND	ND	0/19



**APPENDIX O.28**  
**SITE 69 ECOLOGICAL SAMPLES INORGANICS**

---

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
	Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
	Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
	Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units						
ALUMINUM	MG/KG	44 U	2.5 U	29.8 U	1.2 U	2.5 U	129 UJ
ANTIMONY	MG/KG	0.16 UJ	0.21 UJ	0.12 UJ	0.17 UJ	0.13 UJ	0.07 UJ
ARSENIC	MG/KG	3.2 U	0.36 UJ	0.65 UJ	0.58 UJ	1.4 U	0.9 UJ
BARIUM	MG/KG	3.9 UJ	0.16 UJ	0.39 UJ	0.08 UJ	0.23 UJ	0.26 UJ
BERYLLIUM	MG/KG	0.001 U	0.004 B	0.001 U	0.01 B	0.002 U	0.001 JB
CADMIUM	MG/KG	0.03 U	0.02 U	0.02 U	0.02 U	0.03 U	0.11 B
CALCIUM	MG/KG	35600 J	4850 J	11800 J	1720 J	12600 J	1600
CHROMIUM	MG/KG	0.33 U	0.37 U	0.69 U	0.28 U	0.53 U	0.86 UJ
COBALT	MG/KG	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.12 UJ
COPPER	MG/KG	4.5 UJ	0.45 UJ	0.39 UJ	0.29 UJ	0.31 UJ	2.6 UJ
IRON	MG/KG	39.2 UJ	12.8 UJ	31.1 UJ	6.9 UJ	8.9 UJ	137 UJ
LEAD	MG/KG	0.07 UJ	0.01 UJ	0.03 UJ	0.01 UJ	0.01 UJ	0.18 UJ
MAGNESIUM	MG/KG	2180	344	378	310	482	494
MANGANESE	MG/KG	5 UJ	0.76 UJ	0.86 UJ	0.29 UJ	2.7 UJ	2.1 U
MERCURY	MG/KG	0.03 UJ	0.01 UJ	0.01 UJ	0.02 UJ	0.03 UJ	0.03 UJ
NICKEL	MG/KG	0.14 UJ	0.12 UJ	0.16 UJ	0.06 UJ	0.1 UJ	0.4 UJ
POTASSIUM	MG/KG	2420	3240	2470	3870	3620	617 J
SELENIUM	MG/KG	0.45	0.14 B	0.26	0.29	0.17 B	0.25 J
SILVER	MG/KG	0.28	0.005 UJ	0.005 UJ	0.005 UJ	0.01 UJ	0.1 J
SODIUM	MG/KG	3730	1010	1100	755	1250	2310
THALLIUM	MG/KG	0.74 UJ	0.14 UJ	0.14 UJ	0.15 UJ	0.15 UJ	0.01 UJ
VANADIUM	MG/KG	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.26 UJ
ZINC	MG/KG	26.5	11.2	15	8.3 U	16.4	239

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
	Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
	Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/11/92	9/11/92
	Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units						
ALUMINUM	MG/KG	6.4 UJ	362 J	30.3 UJ	61.1 U	98.6 U	19.8 U
ANTIMONY	MG/KG	0.07 UJ	0.07 UJ	0.07 UJ	0.08 UJ	0.1 UJ	0.09 UJ
ARSENIC	MG/KG	0.38 U	0.95 UJ	0.71 UJ	1.1 UJ	1.8 UJ	0.95 UJ
BARIUM	MG/KG	0.81 UJ	0.54 UJ	0.44 UJ	2.6 UJ	0.7 UJ	0.33 UJ
BERYLLIUM	MG/KG	0.001 UJ	0.01 JB	0.001 UJ	0.002 U	0.01 B	0.001 U
CADMIUM	MG/KG	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.02 U
CALCIUM	MG/KG	3010	12100	16300	10000 J	12200 J	13600 J
CHROMIUM	MG/KG	0.82 UJ	1.2 UJ	2.4 UJ	1.4 U	0.74 U	0.65 U
COBALT	MG/KG	0.03 UJ	0.07 UJ	0.05 UJ	0.03 U	0.06 U	0.02 U
COPPER	MG/KG	0.51 UJ	1 UJ	0.39 UJ	0.36 UJ	0.53 UJ	0.46 UJ
IRON	MG/KG	19.9 UJ	217 J	45.1 UJ	62 UJ	71.1 UJ	20.8 UJ
LEAD	MG/KG	0.02 UJ	0.59 UJ	0.03 UJ	0.14 UJ	0.45 UJ	0.02 UJ
MAGNESIUM	MG/KG	299	450	475	415	448	392
MANGANESE	MG/KG	0.32 U	2.2 U	1.5 U	2.6 UJ	3.7 UJ	1.1 UJ
MERCURY	MG/KG	0.01 UJ	0.01 UJ	0.01 UJ	0.003 UJ	0.01 UJ	0.01 UJ
NICKEL	MG/KG	0.16 UJ	0.27 UJ	0.83 UJ	0.47 UJ	0.11 UJ	0.12 UJ
POTASSIUM	MG/KG	3270	2270	2650	2540	2690	2580
SELENIUM	MG/KG	0.05 U	0.21	0.51 J	0.21 B	0.22 B	0.37
SILVER	MG/KG	0.02 JB	0.07 J	0.02 JB	0.01 JB	0.01 JB	0.005 UJ
SODIUM	MG/KG	1100	1240 J	1440 J	1430 J	1380 J	1460 J
THALLIUM	MG/KG	0.02 UJ	0.02 UJ	0.03 JB	0.15 UJ	0.15 UJ	0.15 UJ
VANADIUM	MG/KG	0.01 UJ	0.48 UJ	0.07 UJ	0.1 UJ	0.57 UJ	0.01 UJ
ZINC	MG/KG	9.3 U	20.2	13.9	18.1	17.7	12.9

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
	Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
	Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
	Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units						
ALUMINUM	MG/KG	303 J	3.8 UJ	1.4 UJ	13.7 U	154 UJ	208 J
ANTIMONY	MG/KG	0.07 UJ	0.07 UJ	0.08 UJ	0.16 UJ	0.07 UJ	0.1 UJ
ARSENIC	MG/KG	1.3 U	0.56 U	0.61 U	1.2 UJ	1.2 U	1.1 U
BARIUM	MG/KG	0.47 UJ	0.45 UJ	0.32 UJ	0.3 UJ	0.27 UJ	1.2 UJ
BERYLLIUM	MG/KG	0.01 JB	0.001 UJ	0.002 UJ	0.002 U	0.01 JB	0.005 JB
CADMIUM	MG/KG	0.22	0.03 UJ	0.03 U	0.03 U	0.12 B	0.03 U
CALCIUM	MG/KG	1190	997	603	12600 J	1640	7080
CHROMIUM	MG/KG	2.1 UJ	0.35 UJ	0.36 UJ	0.59 U	0.9 UJ	3.7 UJ
COBALT	MG/KG	0.17 UJ	0.04 UJ	0.02 UJ	0.04 U	0.13 UJ	0.09 UJ
COPPER	MG/KG	6.9 UJ	0.37 UJ	0.29 UJ	0.24 UJ	4.8 UJ	0.96 UJ
IRON	MG/KG	263 UJ	11.7 UJ	8.9 UJ	19 UJ	156 UJ	194 J
LEAD	MG/KG	0.26 UJ	0.02 UJ	0.02 UJ	0.01 UJ	0.18 UJ	0.17 UJ
MAGNESIUM	MG/KG	540	285	268	369	496	373
MANGANESE	MG/KG	2.8 U	0.27 U	0.17 U	1.2 UJ	2.8 U	2 U
MERCURY	MG/KG	0.01 UJ	0.01 UJ	0.02 UJ	0.01 UJ	0.02 UJ	0.01 UJ
NICKEL	MG/KG	0.92 UJ	0.11 UJ	0.08 UJ	0.12 UJ	0.46 UJ	1.6 UJ
POTASSIUM	MG/KG	742	3680	3580	2510	822	1930
SELENIUM	MG/KG	0.4 J	0.05 UJ	0.05 UJ	0.47	0.34 J	0.12 B
SILVER	MG/KG	0.11 J	0.01 JB	0.01 UR	0.01 UJ	0.14 J	0.03 J
SODIUM	MG/KG	2420 J	693 J	663 J	1390 J	2540 J	1030 J
THALLIUM	MG/KG	0.02 UJ	0.02 UJ	0.02 UJ	0.15 UJ	0.02 UJ	0.15 UJ
VANADIUM	MG/KG	0.53 UJ	0.02 UJ	0.01 UJ	0.01 UJ	0.3 UJ	0.36 UJ
ZINC	MG/KG	312	9.9	7.8 U	12.6	189	13.8

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No: 69-NR3-US  
 Depth: (US1&2)  
 Date Sampled: 9/14/92  
 Lab Id: 00523-02

Parameter	Units	
ALUMINUM	MG/KG	2.8 U
ANTIMONY	MG/KG	0.12 UJ
ARSENIC	MG/KG	1.8 U
BARIUM	MG/KG	0.25 UJ
BERYLLIUM	MG/KG	0.002 U
CADMIUM	MG/KG	0.08 U
CALCIUM	MG/KG	4470 J
CHROMIUM	MG/KG	0.31 U
COBALT	MG/KG	0.01 UJ
COPPER	MG/KG	0.33 UJ
IRON	MG/KG	12.9 UJ
LEAD	MG/KG	0.01 UJ
MAGNESIUM	MG/KG	313
MANGANESE	MG/KG	0.69 UJ
MERCURY	MG/KG	0.01 UJ
NICKEL	MG/KG	0.06 UJ
POTASSIUM	MG/KG	3450
SELENIUM	MG/KG	0.14 B
SILVER	MG/KG	0.01 UJ
SODIUM	MG/KG	1040 J
THALLIUM	MG/KG	0.15 UJ
VANADIUM	MG/KG	0.01 UJ
ZINC	MG/KG	9.3 U

SITE 69 ECOLOGICAL SAMPLES  
 DATA AND FREQUENCY SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Units	Sample No:	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	LOCATION OF	FREQUENCY
		Depth:	NONDETECTED	NONDETECTED	DETECTED	DETECTED	MAXIMUM	OF
		Date Sampled:					DETECTED	DETECTION
		Lab Id:						
ALUMINUM	MG/KG		1.2 U	154 UJ	208 J	362 J	69-NR1-AM	3/19
ANTIMONY	MG/KG		0.07 UJ	0.21 UJ	ND	ND		0/19
ARSENIC	MG/KG		0.36 UJ	3.2 U	ND	ND		0/19
BARIUM	MG/KG		0.08 UJ	3.9 UJ	ND	ND		0/19
BERYLLIUM	MG/KG		0.001 U	0.002 U	0.001 JB	0.01 B	69-NR3-OY	8/19
CADMIUM	MG/KG		0.02 U	0.03 U	0.11 B	0.22	69-NR2-OY	3/19
CALCIUM	MG/KG		NA	NA	603	35600 J	69-EC3-BC	19/19
CHROMIUM	MG/KG		0.28 U	3.7 UJ	ND	ND		0/19
COBALT	MG/KG		0.01 U	0.17 UJ	ND	ND		0/19
COPPER	MG/KG		0.24 UJ	6.9 UJ	ND	ND		0/19
IRON	MG/KG		6.9 UJ	263 UJ	194 J	217 J	69-NR1-AM	2/19
LEAD	MG/KG		0.01 UJ	0.99 UJ	ND	ND		0/19
MAGNESIUM	MG/KG		NA	NA	268	2180	69-EC3-BC	19/19
MANGANESE	MG/KG		0.17 U	5 UJ	ND	ND		0/19
MERCURY	MG/KG		0.003 UJ	0.03 UJ	ND	ND		0/19
NICKEL	MG/KG		0.06 UJ	1.6 UJ	ND	ND		0/19
POTASSIUM	MG/KG		NA	NA	617 J	3870	69-EC4-FL1	19/19
SELENIUM	MG/KG		0.05 U	0.05 U	0.12 B	0.51 J	69-NR1-CR	16/19
SILVER	MG/KG		0.005 UJ	0.01 UJ	0.01 JB	0.28	69-EC3-BC	11/19
SODIUM	MG/KG		NA	NA	663 J	3730	69-EC3-BC	19/19
THALLIUM	MG/KG		0.01 UJ	0.74 UJ	0.03 JB	0.03 JB	69-NR1-CR	1/19
VANADIUM	MG/KG		0.01 UJ	0.57 UJ	ND	ND		0/19
ZINC	MG/KG		7.8 U	9.3 U	9.9	312	69-NR2-OY	15/19

**APPENDIX P**  
**STATISTICAL SUMMARY**

---

**APPENDIX P.1**  
**SITE 69 SURFACE SOIL ORGANICS**

---



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
1,2,4-Trichlorobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
1,3-Dichlorobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
1,4-Dichlorobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2-Chloronaphthalene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2-Chlorophenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2-Methylnaphthalene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2-Methylphenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2-Nitroaniline	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
2-Nitrophenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,4-Dichlorophenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,4-Dimethylphenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,4-Dinitrophenol	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
2,4-Dinitrotoluene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,4,5-Trichlorophenol	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
2,4,6-Trichlorophenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
2,6-Dinitrotoluene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
3-Nitroaniline	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
3,3'-Dichlorobenzidine	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Bromophenyl-phenylether	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Chloro-3-methylphenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Chloroaniline	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Chlorophenyl phenyl ether	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Methylphenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
4-Nitroaniline	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
4-Nitrophenol	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
4,6-Dinitro-2-methylphenol	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U
Acenaphthene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Acenaphthylene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Anthracene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Benzo[a]anthracene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Benzo[a]pyrene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Benzo[g,h,i]perylene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Benzo[k]fluoranthene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
bis(2-Chloroethoxy) methane	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
bis(2-Chloroethyl) ether	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
bis(2-Ethylhexyl)phthalate	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	43.0 J	181.5 U
Butyl benzyl phthalate	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Carbazole	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Chrysene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Dibenzofuran	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Dibenz[a,h]anthracene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Diethylphthalate	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Dimethyl phthalate	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
di-n-Butylphthalate	UG/KG	181.5 U	175.0 U	51.0 J	36.0 J	200.0 J	280.0 J
di-n-Octylphthalate	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Fluoranthene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Fluorene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Hexachlorobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Hexachlorobutadiene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Hexachlorocyclopentadiene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Hexachloroethane	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Indeno[1,2,3-cd]pyrene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Isophorone	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Naphthalene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Nitrobenzene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
N-Nitroso-di-n-propylamine	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
N-nitrosodiphenylamine	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Pentachlorophenol	UG/KG	440.0 U	424.0 U	432.0 U	440.0 U	440.0 U	440.0 U
Phenanthrene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Phenol	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U
Pyrene	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U	181.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8

VOLATILES

Chloromethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
Bromomethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
Vinyl chloride	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
Chloroethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
Methylene chloride	UG/KG	47.0 J	48.0	9.0 J	10.0 J	5.50 U	5.50 U
Acetone	UG/KG	43.5 U	31.0 U	5.5 UJ	31.0 J	150.0 J	180.0 J
Carbon Disulfide	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
1,1-Dichloroethene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
1,1-Dichloroethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
1,2-Dichloroethene(total)	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
Chloroform	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
1,2-Dichloroethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	5.5 U	5.4 U
2-Butanone	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 UJ	10.9 J	5.4 UJ
1,1,1-Trichloroethane	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Carbon tetrachloride	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Bromodichloromethane	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
1,2-Dichloropropane	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
cis-1,3-Dichloropropene	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Trichloroethene	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Dibromochloromethane	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
1,1,2-Trichloroethane	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Benzene	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
trans-1,3-Dichloropropene	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
Bromoform	UG/KG	5.4 U	5.3 U	5.4 U	5.4 U	5.5 U	5.4 U
4-Methyl-2-pentanone	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	12.0 J	5.4 U
2-Hexanone	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Tetrachloroethene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
1,1,2,2-Tetrachloroethane	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Toluene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Chlorobenzene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Ethylbenzene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Styrene	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U
Xylenes (total)	UG/KG	5.4 U	5.3 U	5.4 UJ	5.4 U	5.5 U	5.4 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
beta-BHC	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
delta-BHC	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Lindane (gamma-BHC)	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Heptachlor	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Aldrin	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Heptachlor epoxide	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Endosulfan I	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Dieldrin	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
4,4'-DDE	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
Endrin	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
Endosulfan II	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
4,4'-DDD	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
Endosulfan sulfate	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
4,4'-DDT	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
Methoxychlor	UG/KG	9.2 UJ	9.1 UJ	9.2 UJ	9.2 UJ	12.2 UJ
Endrin ketone	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
Endrin aldehyde	UG/KG	1.78 UJ	1.76 UJ	1.78 UJ	1.78 UJ	2.36 UJ
alpha-Chlordane	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
gamma-Chlordane	UG/KG	0.92 UJ	0.91 UJ	0.92 UJ	0.92 UJ	1.22 UJ
Toxaphene	UG/KG	91.5 UJ	90.5 UJ	91.5 UJ	91.5 UJ	121.5 UJ
Aroclor 1016	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ
Aroclor 1221	UG/KG	36.1 UJ	35.7 UJ	36.0 UJ	36.0 UJ	47.9 UJ
Aroclor 1232	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ
Aroclor 1242	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ
Aroclor 1248	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ
Aroclor 1254	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ
Aroclor 1260	UG/KG	17.8 UJ	17.6 UJ	17.8 UJ	17.8 UJ	23.6 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Chloroacetophenone	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
Hydroxyacetophenone	UG/KG	910.0 U	875.0 U	890.0 U	910.0 U	910.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	910.0 U	875.0 U	890.0 U	910.0 U	910.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	910.0 U	875.0 U	890.0 U	910.0 U	910.0 U
1,4-Dithiane	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
1,4-Oxathiane	UG/KG	181.5 U	175.0 U	178.0 U	181.5 U	181.5 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	3.35 U	3.32 U	3.38 U	3.35 U	3.38 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
1,2,4-Trichlorobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
1,3-Dichlorobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
1,4-Dichlorobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2-Chloronaphthalene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2-Chlorophenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2-Methylnaphthalene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2-Methylphenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2-Nitroaniline	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
2-Nitrophenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,4-Dichlorophenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,4-Dimethylphenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,4-Dinitrophenol	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
2,4-Dinitrotoluene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,4,5-Trichlorophenol	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
2,4,6-Trichlorophenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
2,6-Dinitrotoluene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
3-Nitroaniline	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
3,3'-Dichlorobenzidine	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Bromophenyl-phenylether	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Chloro-3-methylphenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Chloroaniline	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Chlorophenyl phenyl ether	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Methylphenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
4-Nitroaniline	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
4-Nitrophenol	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
4,6-Dinitro-2-methylphenol	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	444.5 U
Acenaphthene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
Acenaphthylene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
Anthracene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
Benzo[a]anthracene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U
Benzo[a]pyrene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	183.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Benzo[g,h,i]perylene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Benzo[k]fluoranthene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
bis(2-Chloroethoxy) methane	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
bis(2-Chloroethyl) ether	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
bis(2-Ethylhexyl)phthalate	UG/KG	47.0 J	183.5 U	181.5 U	48.0 J	190 U	183.5 U
Butyl benzyl phthalate	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Carbazole	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Chrysene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Dibenzofuran	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Dibenz[a,h]anthracene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Diethylphthalate	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Dimethyl phthalate	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
di-n-Butylphthalate	UG/KG	83.0 J	37.0 J	140.0 J	170.0 J	55 J	240.0 J
di-n-Octylphthalate	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Fluoranthene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Fluorene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Hexachlorobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Hexachlorobutadiene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Hexachlorocyclopentadiene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Hexachloroethane	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Indeno[1,2,3-cd]pyrene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Isophorone	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Naphthalene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Nitrobenzene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
N-Nitroso-di-n-propylamine	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
N-nitrosodiphenylamine	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Pentachlorophenol	UG/KG	440.0 U	444.5 U	440.0 U	424.0 U	460 U	444.5 U
Phenanthrene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Phenol	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Pyrene	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7
<b><u>VOLATILES</u></b>						
Chloromethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Bromomethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Vinyl chloride	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Chloroethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Methylene chloride	UG/KG	5.5 UJ	5.50 U	5.5 UJ	6.00 J	6 J
Acetone	UG/KG	170.0 J	53.5 U	340.0 J	5.50 UJ	5.50 U
Carbon Disulfide	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
1,1-Dichloroethene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
1,1-Dichloroethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
1,2-Dichloroethene(total)	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Chloroform	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
1,2-Dichloroethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
2-Butanone	UG/KG	5.4 UJ	5.5 UJ	5.5 UJ	5.5 U	6 U
1,1,1-Trichloroethane	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Carbon tetrachloride	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Bromodichloromethane	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
1,2-Dichloropropane	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
cis-1,3-Dichloropropene	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Trichloroethene	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Dibromochloromethane	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
1,1,2-Trichloroethane	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Benzene	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
trans-1,3-Dichloropropene	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
Bromoform	UG/KG	5.4 UJ	5.5 U	5.5 U	5.5 U	6 U
4-Methyl-2-pentanone	UG/KG	11.0 J	10.0 J	5.5 UJ	5.5 U	6 U
2-Hexanone	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Tetrachloroethene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Toluene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Chlorobenzene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Ethylbenzene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Styrene	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U
Xylenes (total)	UG/KG	5.4 UJ	5.5 U	5.5 UJ	5.5 U	6 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
<u>PESTICIDE/PCBS</u>							
alpha-BHC	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
beta-BHC	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
delta-BHC	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Lindane (gamma-BHC)	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Heptachlor	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Aldrin	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Heptachlor epoxide	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Endosulfan I	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Dieldrin	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
4,4'-DDE	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
Endrin	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
Endosulfan II	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
4,4'-DDD	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
Endosulfan sulfate	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
4,4'-DDT	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
Methoxychlor	UG/KG	9.2 UJ	9.4 UJ	9.4 UJ	9.1 UJ	9.8 UJ	9.5 UJ
Endrin ketone	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
Endrin aldehyde	UG/KG	1.78 UJ	1.82 UJ	1.82 UJ	1.76 UJ	1.9 UJ	1.84 UJ
alpha-Chlordane	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
gamma-Chlordane	UG/KG	0.92 UJ	0.94 UJ	0.94 UJ	0.91 UJ	0.98 UJ	0.95 UJ
Toxaphene	UG/KG	91.5 UJ	93.5 UJ	93.5 UJ	90.5 UJ	98 UJ	94.5 UJ
Aroclor 1016	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ
Aroclor 1221	UG/KG	36.0 UJ	36.8 UJ	36.8 UJ	35.7 UJ	38.5 UJ	37.2 UJ
Aroclor 1232	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ
Aroclor 1242	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ
Aroclor 1248	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ
Aroclor 1254	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ
Aroclor 1260	UG/KG	17.8 UJ	18.2 UJ	18.2 UJ	17.6 UJ	19 UJ	18.4 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Chloroacetophenone	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
Hydroxyacetophenone	UG/KG	910.0 U	120.0 J	910.0 U	875.0 U	950 U	915.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	910.0 U	915.0 U	910.0 U	875.0 U	950 U	915.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	910.0 U	915.0 U	910.0 U	875.0 U	950 U	915.0 U
1,4-Dithiane	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
1,4-Oxathiane	UG/KG	181.5 U	183.5 U	181.5 U	175.0 U	190 U	183.5 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	3.38 U	3.45 U	3.45 U	3.32 U	3.595 U	3.47 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
1,2,4-Trichlorobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
1,3-Dichlorobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
1,4-Dichlorobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2-Chloronaphthalene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2-Chlorophenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2-Methylnaphthalene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2-Methylphenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2-Nitroaniline	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
2-Nitrophenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,4-Dichlorophenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,4-Dimethylphenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,4-Dinitrophenol	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
2,4-Dinitrotoluene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,4,5-Trichlorophenol	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
2,4,6-Trichlorophenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
2,6-Dinitrotoluene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
3-Nitroaniline	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
3,3'-Dichlorobenzidine	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Bromophenyl-phenylether	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Chloro-3-methylphenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Chloroaniline	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Chlorophenyl phenyl ether	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Methylphenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
4-Nitroaniline	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
4-Nitrophenol	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
4,6-Dinitro-2-methylphenol	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U
Acenaphthene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
Acenaphthylene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
Anthracene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
Benzo[a]anthracene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U
Benzo[a]pyrene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Benzo[g,h,i]perylene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Benzo[k]fluoranthene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
bis(2-Chloroethoxy) methane	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
bis(2-Chloroethyl) ether	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
bis(2-Ethylhexyl)phthalate	UG/KG	181.5 U	183.5 U	190 U	181.5 U	46 J	181.5 U
Butyl benzyl phthalate	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Carbazole	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Chrysene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Dibenzofuran	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Dibenz[a,h]anthracene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Diethylphthalate	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Dimethyl phthalate	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
di-n-Butylphthalate	UG/KG	230.0 J	200 J	140 J	160.0 J	140 J	86 J
di-n-Octylphthalate	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Fluoranthene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Fluorene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Hexachlorobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Hexachlorobutadiene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Hexachlorocyclopentadiene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Hexachloroethane	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Indeno[1,2,3-cd]pyrene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Isophorone	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Naphthalene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Nitrobenzene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
N-Nitroso-di-n-propylamine	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
N-nitrosodiphenylamine	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Pentachlorophenol	UG/KG	440.0 U	444.5 U	460 U	440.0 U	444.5 U	440 U
Phenanthrene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Phenol	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Pyrene	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<b><u>VOLATILES</u></b>						
Chloromethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Bromomethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Vinyl chloride	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Chloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Methylene chloride	UG/KG	5.00 J	7 J	10 J	8.00 J	6 J
Acetone	UG/KG	5.50 UJ	5.5 U	5.5 U	5.50 U	5.5 U
Carbon Disulfide	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,1-Dichloroethene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,1-Dichloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,2-Dichloroethene(total)	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Chloroform	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,2-Dichloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
2-Butanone	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,1,1-Trichloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	2 J
Carbon tetrachloride	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Bromodichloromethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,2-Dichloropropane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
cis-1,3-Dichloropropene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Trichloroethene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Dibromochloromethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,1,2-Trichloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Benzene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
trans-1,3-Dichloropropene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Bromoform	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
4-Methyl-2-pentanone	UG/KG	5.5 U	5.5 U	1 J	2.00 J	1 J
2-Hexanone	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Tetrachloroethene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
1,1,2,2-Tetrachloroethane	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Toluene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Chlorobenzene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Ethylbenzene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Styrene	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ
Xylenes (total)	UG/KG	5.5 U	5.5 U	5.5 U	5.5 U	5.45 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
beta-BHC	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
delta-BHC	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Lindane (gamma-BHC)	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Heptachlor	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Aldrin	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Heptachlor epoxide	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Endosulfan I	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Dieldrin	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.835 UJ
4,4'-DDE	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.815 UJ
Endrin	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.815 UJ
Endosulfan II	UG/KG	1.80 UJ	1.815 UJ	3.4 J	1.82 UJ	1.835 UJ
4,4'-DDD	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.815 UJ
Endosulfan sulfate	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.835 UJ
4,4'-DDT	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.815 UJ
Methoxychlor	UG/KG	9.3 UJ	9.35 UJ	9.8 UJ	9.4 UJ	9.35 UJ
Endrin ketone	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.835 UJ
Endrin aldehyde	UG/KG	1.80 UJ	1.815 UJ	1.9 UJ	1.82 UJ	1.835 UJ
alpha-Chlordane	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
gamma-Chlordane	UG/KG	0.93 UJ	0.935 UJ	0.98 UJ	0.94 UJ	0.935 UJ
Toxaphene	UG/KG	92.5 UJ	93.5 UJ	98 UJ	93.5 UJ	93.5 UJ
Aroclor 1016	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ
Aroclor 1221	UG/KG	36.4 UJ	36.85 UJ	38.5 UJ	36.8 UJ	36.85 UJ
Aroclor 1232	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ
Aroclor 1242	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ
Aroclor 1248	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ
Aroclor 1254	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ
Aroclor 1260	UG/KG	18.0 UJ	18.15 UJ	19 UJ	18.2 UJ	18.15 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00	
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A	
Date Sampled:	01/07/94			01/08/94			
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9	
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/KG	181.5 U	183.5 U	190 U	181.5 U	51 J	181.5 U
Chloroacetophenone	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
Hydroxyacetophenone	UG/KG	910.0 U	915 U	950 U	910.0 U	160 J	910 U
Bis(2'-chloroethyl)disulfide	UG/KG	910.0 U	915 U	950 U	910.0 U	915 U	910 U
Bis(2'-chloroethyl)trisulfide	UG/KG	910.0 U	915 U	950 U	910.0 U	915 U	910 U
1,4-Dithiane	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
1,4-Oxathiane	UG/KG	181.5 U	183.5 U	190 U	181.5 U	183.5 U	181.5 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	MG/KG	3.38 U	3.44 U	3.595 U	3.41 U	3.47 U	3.105 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00	
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A	
Date Sampled:							
Percent Solids	59.7	88.7	88	91	91.8	93.6	
<b>SEMIVOLATILES</b>							
1,2-Dichlorobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
1,2,4-Trichlorobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
1,3-Dichlorobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
1,4-Dichlorobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2-Chloronaphthalene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2-Chlorophenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2-Methylnaphthalene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2-Methylphenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2-Nitroaniline	UG/KG	680 U	448 U	456 U	440 U	432 U	424
2-Nitrophenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,2'-oxybis-(1-chloropropane)	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,4-Dichlorophenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,4-Dimethylphenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,4-Dinitrophenol	UG/KG	680 U	448 U	456 U	440 U	432 U	424
2,4-Dinitrotoluene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,4,5-Trichlorophenol	UG/KG	680 U	448 U	456 U	440 U	432 U	424
2,4,6-Trichlorophenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
2,6-Dinitrotoluene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
3-Nitroaniline	UG/KG	680 U	448 U	456 U	440 U	432 U	424
3,3'-Dichlorobenzidine	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Bromophenyl-phenylether	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Chloro-3-methylphenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Chloroaniline	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Chlorophenyl phenyl ether	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Methylphenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
4-Nitroaniline	UG/KG	680 U	448 U	456 U	440 U	432 U	424
4-Nitrophenol	UG/KG	680 U	448 U	456 U	440 U	432 U	424
4,6-Dinitro-2-methylphenol	UG/KG	680 U	448 U	456 U	440 U	432 U	424
Acenaphthene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Acenaphthylene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Anthracene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Benzo[a]anthracene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Benzo[a]pyrene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Benzo[g,h,i]perylene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Benzo[k]fluoranthene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
bis(2-Chloroethoxy) methane	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
bis(2-Chloroethyl) ether	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
bis(2-Ethylhexyl)phthalate	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Butyl benzyl phthalate	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Carbazole	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Chrysene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Dibenzofuran	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Dibenz[a,h]anthracene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Diethylphthalate	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Dimethyl phthalate	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
di-n-Butylphthalate	UG/KG	130 J	120 J	180 J	92 J	74 J	160
di-n-Octylphthalate	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Fluoranthene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Fluorene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Hexachlorobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Hexachlorobutadiene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Hexachlorocyclopentadiene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Hexachloroethane	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Indeno[1,2,3-cd]pyrene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Isophorone	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Naphthalene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Nitrobenzene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
N-Nitroso-di-n-propylamine	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
N-nitrosodiphenylamine	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Pentachlorophenol	UG/KG	680 U	448 U	456 U	440 U	432 U	424
Phenanthrene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Phenol	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Pyrene	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A
Date Sampled:						
Percent Solids	59.7	88.7	88	91	91.8	93.6
<b><u>VOLATILES</u></b>						
Chloromethane	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
Bromomethane	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
Vinyl chloride	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
Chloroethane	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
Methylene chloride	UG/KG	8.5 U	5.5 UJ	18 U	97	105
Acetone	UG/KG	12.5 U	6.5 UJ	60 U	18 U	12 U
Carbon Disulfide	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
1,1-Dichloroethene	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
1,1-Dichloroethane	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
1,2-Dichloroethene(total)	UG/KG	8.35 U	4 J	5.7 U	5.5 U	5.45 U
Chloroform	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
1,2-Dichloroethane	UG/KG	8.35 U	5.65 UJ	5.7 U	5.5 U	5.45 U
2-Butanone	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
1,1,1-Trichloroethane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
Carbon tetrachloride	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
Bromodichloromethane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
1,2-Dichloropropane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
cis-1,3-Dichloropropene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
Trichloroethene	UG/KG	8.35 U	5.65 UJ	3 J	5.5 U	5.45 U
Dibromochloromethane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
1,1,2-Trichloroethane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
Benzene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 U
trans-1,3-Dichloropropene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Bromoform	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
4-Methyl-2-pentanone	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
2-Hexanone	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Tetrachloroethene	UG/KG	8.35 U	5.65 UJ	2 J	5.5 U	5.45 UJ
1,1,2,2-Tetrachloroethane	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Toluene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Chlorobenzene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Ethylbenzene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Styrene	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5.45 UJ
Xylenes (total)	UG/KG	8.35 U	5.65 UJ	5.7 UJ	5.5 U	5 J

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00	
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A	
Date Sampled:							
Percent Solids	59.7	88.7	88	91	91.8	93.6	
<u>PESTICIDE/PCBS</u>							
alpha-BHC	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
beta-BHC	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
delta-BHC	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Lindane (gamma-BHC)	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Heptachlor	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Aldrin	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Heptachlor epoxide	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Endosulfan I	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Dieldrin	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
4,4'-DDE	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
Endrin	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
Endosulfan II	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
4,4'-DDD	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
Endosulfan sulfate	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
4,4'-DDT	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
Methoxychlor	UG/KG	14.2 UJ	9.6 UJ	9.7 UJ	9.35 UJ	9.25 UJ	14.2
Endrin ketone	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
Endrin aldehyde	UG/KG	2.755 UJ	1.865 UJ	1.88 UJ	1.815 UJ	1.8 UJ	2.755
alpha-Chlordane	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
gamma-Chlordane	UG/KG	1.42 UJ	0.96 UJ	0.97 UJ	0.935 UJ	0.925 UJ	1.42
Toxaphene	UG/KG	142 UJ	96 UJ	97 UJ	93.5 UJ	92.5 UJ	142
Aroclor 1016	UG/KG	27.55 UJ	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55
Aroclor 1221	UG/KG	56 UJ	37.85 UJ	38.2 UJ	36.85 UJ	36.5 UJ	56
Aroclor 1232	UG/KG	27.55 UJ	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55
Aroclor 1242	UG/KG	27.55 UJ	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55
Aroclor 1248	UG/KG	27.55 UJ	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55
Aroclor 1254	UG/KG	27.55 UJ	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55
Aroclor 1260	UG/KG	94 J	18.65 UJ	18.8 UJ	18.15 UJ	18 UJ	27.55

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**CHEMICAL STORAGE AREA SURFACE SOIL**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**ORGANICS**

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00	
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A	
Date Sampled:							
Percent Solids	59.7	88.7	88	91	91.8	93.6	
<b>CHEMICAL SURETY</b>							
Acetophenone	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Chloroacetophenone	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
Hydroxyacetophenone	UG/KG	1400 U	925 U	940 U	910 U	890 U	875
Bis(2'-chloroethyl)disulfide	UG/KG	1400 U	925 U	940 U	910 U	890 U	875
Bis(2'-chloroethyl)trisulfide	UG/KG	1400 U	925 U	940 U	910 U	890 U	875
1,4-Dithiane	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
1,4-Oxathiane	UG/KG	280.5 U	185 U	188 U	181.5 U	178 U	175
<b>THIODIGLYCOL</b>							
Thiodiglycol	MG/KG	3.115 U	3.12 U	3.12 U	3.12 U	3.115 U	3.12

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

<u>SEMIVOLATILES</u>		
1,2-Dichlorobenzene	UG/KG U	183.5 U
1,2,4-Trichlorobenzene	UG/KG U	183.5 U
1,3-Dichlorobenzene	UG/KG U	183.5 U
1,4-Dichlorobenzene	UG/KG U	183.5 U
2-Chloronaphthalene	UG/KG U	183.5 U
2-Chlorophenol	UG/KG U	183.5 U
2-Methylnaphthalene	UG/KG U	183.5 U
2-Methylphenol	UG/KG U	183.5 U
2-Nitroaniline	UG/KG U	444.5 U
2-Nitrophenol	UG/KG U	183.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG U	183.5 U
2,4-Dichlorophenol	UG/KG U	183.5 U
2,4-Dimethylphenol	UG/KG U	183.5 U
2,4-Dinitrophenol	UG/KG U	444.5 U
2,4-Dinitrotoluene	UG/KG U	183.5 U
2,4,5-Trichlorophenol	UG/KG U	444.5 U
2,4,6-Trichlorophenol	UG/KG U	183.5 U
2,6-Dinitrotoluene	UG/KG U	183.5 U
3-Nitroaniline	UG/KG U	444.5 U
3,3'-Dichlorobenzidine	UG/KG U	183.5 U
4-Bromophenyl-phenylether	UG/KG U	183.5 U
4-Chloro-3-methylphenol	UG/KG U	183.5 U
4-Chloroaniline	UG/KG U	183.5 U
4-Chlorophenyl phenyl ether	UG/KG U	183.5 U
4-Methylphenol	UG/KG U	183.5 U
4-Nitroaniline	UG/KG U	444.5 U
4-Nitrophenol	UG/KG U	444.5 U
4,6-Dinitro-2-methylphenol	UG/KG U	444.5 U
Acenaphthene	UG/KG U	183.5 U
Acenaphthylene	UG/KG U	183.5 U
Anthracene	UG/KG U	183.5 U
Benzo[a]anthracene	UG/KG U	183.5 U
Benzo[a]pyrene	UG/KG U	183.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG U	183.5 U
Benzo[g,h,i]perylene	UG/KG U	183.5 U
Benzo[k]fluoranthene	UG/KG U	183.5 U
bis(2-Chloroethoxy) methane	UG/KG U	183.5 U
bis(2-Chloroethyl) ether	UG/KG U	183.5 U
bis(2-Ethylhexyl)phthalate	UG/KG U	183.5 U
Butyl benzyl phthalate	UG/KG U	183.5 U
Carbazole	UG/KG U	183.5 U
Chrysene	UG/KG U	183.5 U
Dibenzofuran	UG/KG U	183.5 U
Dibenz[a,h]anthracene	UG/KG U	183.5 U
Diethylphthalate	UG/KG U	183.5 U
Dimethyl phthalate	UG/KG U	183.5 U
di-n-Butylphthalate	UG/KG J	130 J
di-n-Octylphthalate	UG/KG U	183.5 U
Fluoranthene	UG/KG U	183.5 U
Fluorene	UG/KG U	183.5 U
Hexachlorobenzene	UG/KG U	183.5 U
Hexachlorobutadiene	UG/KG U	183.5 U
Hexachlorocyclopentadiene	UG/KG U	183.5 U
Hexachloroethane	UG/KG U	183.5 U
Indeno[1,2,3-cd]pyrene	UG/KG U	183.5 U
Isophorone	UG/KG U	183.5 U
Naphthalene	UG/KG U	183.5 U
Nitrobenzene	UG/KG U	183.5 U
N-Nitroso-di-n-propylamine	UG/KG U	183.5 U
N-nitrosodiphenylamine	UG/KG U	183.5 U
Pentachlorophenol	UG/KG U	444.5 U
Phenanthrene	UG/KG U	183.5 U
Phenol	UG/KG U	183.5 U
Pyrene	UG/KG U	183.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

VOLATILES

Chloromethane	UG/KG U	5.5 U
Bromomethane	UG/KG U	5.5 U
Vinyl chloride	UG/KG U	5.5 U
Chloroethane	UG/KG U	5.5 U
Methylene chloride	UG/KG U	11
Acetone	UG/KG U	5.5 U
Carbon Disulfide	UG/KG U	5.5 U
1,1-Dichloroethene	UG/KG U	5.5 U
1,1-Dichloroethane	UG/KG U	5.5 U
1,2-Dichloroethene(total)	UG/KG U	5.5 U
Chloroform	UG/KG U	5.5 U
1,2-Dichloroethane	UG/KG U	5.5 U
2-Butanone	UG/KG U	5.5 U
1,1,1-Trichloroethane	UG/KG U	5.5 U
Carbon tetrachloride	UG/KG U	5.5 U
Bromodichloromethane	UG/KG U	5.5 U
1,2-Dichloropropane	UG/KG U	5.5 U
cis-1,3-Dichloropropene	UG/KG U	5.5 U
Trichloroethene	UG/KG U	5.5 U
Dibromochloromethane	UG/KG U	5.5 U
1,1,2-Trichloroethane	UG/KG U	5.5 U
Benzene	UG/KG U	5.5 U
trans-1,3-Dichloroprcpene	UG/KG U	5.5 U
Bromoform	UG/KG U	5.5 U
4-Methyl-2-pentanone	UG/KG U	5.5 U
2-Hexanone	UG/KG U	5.5 U
Tetrachloroethene	UG/KG U	5.5 U
1,1,2,2-Tetrachloroethane	UG/KG U	5.5 U
Toluene	UG/KG U	5.5 U
Chlorobenzene	UG/KG U	5.5 U
Ethylbenzene	UG/KG U	5.5 U
Styrene	UG/KG U	5.5 U
Xylenes (total)	UG/KG U	5.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
Percent Solids 91

PESTICIDE/PCBS

alpha-BHC	UG/KG UJ	0.935 UJ
beta-BHC	UG/KG UJ	11 J
delta-BHC	UG/KG UJ	0.935 UJ
Lindane (gamma-BHC)	UG/KG UJ	0.935 UJ
Heptachlor	UG/KG UJ	0.935 UJ
Aldrin	UG/KG UJ	0.935 UJ
Heptachlor epoxide	UG/KG UJ	0.935 UJ
Endosulfan I	UG/KG UJ	0.935 UJ
Dieldrin	UG/KG UJ	1.815 UJ
4,4'-DDE	UG/KG UJ	1.815 UJ
Endrin	UG/KG UJ	1.815 UJ
Endosulfan II	UG/KG UJ	1.815 UJ
4,4'-DDD	UG/KG UJ	1.815 UJ
Endosulfan sulfate	UG/KG UJ	1.815 UJ
4,4'-DDT	UG/KG UJ	1.815 UJ
Methoxychlor	UG/KG UJ	9.35 UJ
Endrin ketone	UG/KG UJ	1.815 UJ
Endrin aldehyde	UG/KG UJ	1.815 UJ
alpha-Chlordane	UG/KG UJ	0.935 UJ
gamma-Chlordane	UG/KG UJ	0.935 UJ
Toxaphene	UG/KG UJ	93.5 UJ
Aroclor 1016	UG/KG UJ	18.15 UJ
Aroclor 1221	UG/KG UJ	36.85 UJ
Aroclor 1232	UG/KG UJ	18.15 UJ
Aroclor 1242	UG/KG UJ	18.15 UJ
Aroclor 1248	UG/KG UJ	18.15 UJ
Aroclor 1254	UG/KG UJ	18.15 UJ
Aroclor 1260	UG/KG UJ	18.15 UJ



**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**CHEMICAL STORAGE AREA SURFACE SOIL**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**ORGANICS**

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

CHEMICAL SURETY

Acetophenone	UG/KG U	183.5 U
Chloroacetophenone	UG/KG U	183.5 U
Hydroxyacetophenone	UG/KG U	915 U
Bis(2'-chloroethyl)disulfide	UG/KG U	915 U
Bis(2'-chloroethyl)trisulfide	UG/KG U	915 U
1,4-Dithiane	UG/KG U	183.5 U
1,4-Oxathiane	UG/KG U	183.5 U

THIODIGLYCOL

Thiodiglycol	MG/KG U	3.44 U
--------------	---------	--------

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
2-Chloronaphthalene	UG/KG	ND	NA	NA	NA	NA
2-Chlorophenol	UG/KG	ND	NA	NA	NA	NA
2-Methylnaphthalene	UG/KG	ND	NA	NA	NA	NA
2-Methylphenol	UG/KG	ND	NA	NA	NA	NA
2-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
2-Nitrophenol	UG/KG	ND	NA	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	ND	NA	NA	NA	NA
2,4-Dichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dimethylphenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dinitrophenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	ND	NA	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	ND	NA	NA	NA	NA
3-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	ND	NA	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	ND	NA	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	ND	NA	NA	NA	NA
4-Chloroaniline	UG/KG	ND	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	ND	NA	NA	NA	NA
4-Methylphenol	UG/KG	ND	NA	NA	NA	NA
4-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
4-Nitrophenol	UG/KG	ND	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	ND	NA	NA	NA	NA
Acenaphthene	UG/KG	ND	NA	NA	NA	NA
Acenaphthylene	UG/KG	ND	NA	NA	NA	NA
Anthracene	UG/KG	ND	NA	NA	NA	NA
Benzo[a]anthracene	UG/KG	ND	NA	NA	NA	NA
Benzo[a]pyrene	UG/KG	ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES Cont.</u>					
Benzo[b]fluoranthene	UG/KG	ND	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG	ND	NA	NA	NA
Benzo[k]fluoranthene	UG/KG	ND	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	ND	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG	ND	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	48 J	164.4	56.4	183.7
Butyl benzyl phthalate	UG/KG	ND	NA	NA	NA
Carbazole	UG/KG	ND	NA	NA	NA
Chrysene	UG/KG	ND	NA	NA	NA
Dibenzofuran	UG/KG	ND	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	ND	NA	NA	NA
Diethylphthalate	UG/KG	ND	NA	NA	NA
Dimethyl phthalate	UG/KG	ND	NA	NA	NA
di-n-Butylphthalate	UG/KG	280 J	139.6	64.9	161.8
di-n-Octylphthalate	UG/KG	ND	NA	NA	NA
Fluoranthene	UG/KG	ND	NA	NA	NA
Fluorene	UG/KG	ND	NA	NA	NA
Hexachlorobenzene	UG/KG	ND	NA	NA	NA
Hexachlorobutadiene	UG/KG	ND	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	ND	NA	NA	NA
Hexachloroethane	UG/KG	ND	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/KG	ND	NA	NA	NA
Isophorone	UG/KG	ND	NA	NA	NA
Naphthalene	UG/KG	ND	NA	NA	NA
Nitrobenzene	UG/KG	ND	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	ND	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	ND	NA	NA	NA
Pentachlorophenol	UG/KG	ND	NA	NA	NA
Phenanthrene	UG/KG	ND	NA	NA	NA
Phenol	UG/KG	ND	NA	NA	NA
Pyrene	UG/KG	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>VOLATILES</u>						
Chloromethane	UG/KG	ND	NA	NA	NA	NA
Bromomethane	UG/KG	ND	NA	NA	NA	NA
Vinyl chloride	UG/KG	ND	NA	NA	NA	NA
Chloroethane	UG/KG	ND	NA	NA	NA	NA
Methylene chloride	UG/KG	105	18.4	27.3	27.8	25.5
Acetone	UG/KG	340 J	48.2	80.1	75.6	113.4
Carbon Disulfide	UG/KG	ND	NA	NA	NA	NA
1,1-Dichloroethene	UG/KG	ND	NA	NA	NA	NA
1,1-Dichloroethane	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloroethene(total)	UG/KG	4 J	5.5	0.7	5.8	5.8
Chloroform	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloroethane	UG/KG	ND	NA	NA	NA	NA
2-Butanone	UG/KG	10.9 J	5.8	1.2	6.2	6.2
1,1,1-Trichloroethane	UG/KG	2 J	5.5	0.9	5.8	6.0
Carbon tetrachloride	UG/KG	ND	NA	NA	NA	NA
Bromodichloromethane	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloropropane	UG/KG	ND	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA	NA
Trichloroethene	UG/KG	3 J	5.5	0.8	5.8	5.8
Dibromochloromethane	UG/KG	ND	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/KG	ND	NA	NA	NA	NA
Benzene	UG/KG	ND	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA	NA
Bromoform	UG/KG	ND	NA	NA	NA	NA
4-Methyl-2-pentanone	UG/KG	12 J	5.8	2.5	6.6	7.8
2-Hexanone	UG/KG	ND	NA	NA	NA	NA
Tetrachloroethene	UG/KG	2 J	5.5	0.9	5.8	6.0
1,1,2,2-Tetrachloroethane	UG/KG	ND	NA	NA	NA	NA
Toluene	UG/KG	ND	NA	NA	NA	NA
Chlorobenzene	UG/KG	ND	NA	NA	NA	NA
Ethylbenzene	UG/KG	ND	NA	NA	NA	NA
Styrene	UG/KG	ND	NA	NA	NA	NA
Xylenes (total)	UG/KG	5 J	5.6	0.6	5.8	5.8

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	ND	NA	NA	NA	NA
beta-BHC	UG/KG	11 J	1.4	2.0	2.1	1.5
delta-BHC	UG/KG	ND	NA	NA	NA	NA
Lindane (gamma-BHC)	UG/KG	ND	NA	NA	NA	NA
Heptachlor	UG/KG	ND	NA	NA	NA	NA
Aldrin	UG/KG	ND	NA	NA	NA	NA
Heptachlor epoxide	UG/KG	ND	NA	NA	NA	NA
Endosulfan I	UG/KG	ND	NA	NA	NA	NA
Dieldrin	UG/KG	ND	NA	NA	NA	NA
4,4'-DDE	UG/KG	4.8 J	2.0	0.6	2.2	2.2
Endrin	UG/KG	ND	NA	NA	NA	NA
Endosulfan II	UG/KG	3.4 J	2.0	0.4	2.1	2.1
4,4'-DDD	UG/KG	ND	NA	NA	NA	NA
Endosulfan sulfate	UG/KG	ND	NA	NA	NA	NA
4,4'-DDT	UG/KG	13.3 J	2.4	2.3	3.2	2.6
Methoxychlor	UG/KG	ND	NA	NA	NA	NA
Endrin ketone	UG/KG	ND	NA	NA	NA	NA
Endrin aldehyde	UG/KG	ND	NA	NA	NA	NA
alpha-Chlordane	UG/KG	ND	NA	NA	NA	NA
gamma-Chlordane	UG/KG	ND	NA	NA	NA	NA
Toxaphene	UG/KG	ND	NA	NA	NA	NA
Aroclor 1016	UG/KG	ND	NA	NA	NA	NA
Aroclor 1221	UG/KG	ND	NA	NA	NA	NA
Aroclor 1232	UG/KG	ND	NA	NA	NA	NA
Aroclor 1242	UG/KG	ND	NA	NA	NA	NA
Aroclor 1248	UG/KG	ND	NA	NA	NA	NA
Aroclor 1254	UG/KG	ND	NA	NA	NA	NA
Aroclor 1260	UG/KG	94 J	21.8	15.2	27.0	24.0

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	51 J	180.6	33.7	192.1	202.1
Chloroacetophenone	UG/KG	ND	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG	160 J	867.8	240.8	950.2	1153.7
Bis(2'-chloroethyl)disulfide	UG/KG	ND	NA	NA	NA	NA
Bis(2'-chloroethyl)trisulfide	UG/KG	ND	NA	NA	NA	NA
1,4-Dithiane	UG/KG	ND	NA	NA	NA	NA
1,4-Oxathiane	UG/KG	ND	NA	NA	NA	NA
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	ND	NA	NA	NA	NA

**APPENDIX P.2**  
**SITE 69 SURFACE SOIL INORGANICS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Client Sample ID:	69-CSA-SB01-00	69-CSA-SB02-00	69-CSA-SB03-00	69-CSA-SB04-00	69-CSA-SB05-00	69-CSA-SB06-00
Laboratory Sample ID:	9401041-03A	9401041-04A	9401041-05A	9401041-07A	9401041-13A	9401041-08A
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Percent Solids	93.3	94.2	92.7	93.2	92.0	92.8
	<u>UNITS</u>					
Aluminum	MG/KG 967.0	1370.0	2270.0	1520.0	2310.0	2600.0
Antimony	MG/KG 0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Arsenic	MG/KG 0.310 U	0.310 U	0.315 U	0.310 U	0.315 U	0.310 U
Barium	MG/KG 3.50	4.10	4.30	3.00	4.40	4.10
Beryllium	MG/KG 0.140 U	0.140 U	0.140 U	0.140 U	0.140 U	0.140 U
Cadmium	MG/KG 0.255 U	0.255 U	0.260 U	0.260 U	0.260 U	0.260 U
Calcium	MG/KG 13.4 U	13.3 U	13.5 U	13.4 U	13.6 U	13.5 U
Chromium	MG/KG 0.75 U	0.75 U	1.60	0.75 U	2.20	1.70
Cobalt	MG/KG 2.10 U	2.05 U	2.10 U	2.10 U	2.10 U	2.10 U
Copper	MG/KG 1.75 U	1.70 U	1.75 U	1.75 U	1.75 U	1.75 U
Iron	MG/KG 465.0	803.0	1200.0	1040.0	1170.0	1400.0
Lead	MG/KG 2.80 J	2.10 J	1.10 J	2.20 J	1.20 J	2.10 J
Magnesium	MG/KG 31.3	12.9	54.8	29.3	60.3	63.4
Manganese	MG/KG 15.5	8.20	4.80	2.40	4.90	6.50
Mercury	MG/KG 0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Nickel	MG/KG 1.45 U	1.45 U	1.45 U	1.45 U	1.50 U	1.45 U
Potassium	MG/KG 32.2 U	31.9 U	32.4 U	32.2 U	32.6 U	66.1
Selenium	MG/KG 0.270 UJ	0.265 UJ	0.270 UJ	0.270 UJ	0.270 UJ	0.270 UJ
Silver	MG/KG 0.045 UJ	0.040 UJ	0.045 UJ	0.045 UJ	0.045 UJ	0.090 J
Sodium	MG/KG 20.4 UJ	20.2 UJ	20.5 UJ	20.4 UJ	20.7 UJ	20.5 UJ
Thallium	MG/KG 0.495 U	0.490 U	0.495 U	0.495 U	0.50 U	0.495 U
Vanadium	MG/KG 1.80 U	1.75 U	1.80 U	1.80 U	1.80 U	1.80 U
Zinc	MG/KG 1.35 U	1.50 U	1.20 U	1.50 U	1.25 U	1.60 U
Total Cyanide	MG/KG 0.55 UJ	0.55 UJ	0.55 UJ	0.55 UJ	0.55 UJ	0.55 UJ



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Client Sample ID:	69-CSA-SB07-00	69-CSA-SB08-00	69-CSA-SB09-00	69-CSA-SB10-00	69-CSA-SB11-00	69-CSA-SB12-00	
Laboratory Sample ID:	9401041-09A	9401041-14A	9401041-10A	9401041-16A	9401043-01A	9401041-17A	
Date Sampled:	01/07/94	01/07/94	01/07/94	01/07/94		01/07/94	
Percent Solids	92.9	91.3	91.3	94.2	86.9	89.7	
	<u>UNITS</u>						
Aluminum	MG/KG	3100.0	1330.0	2050.0	2180.0	1130	3370.0
Antimony	MG/KG	0.85 U	0.85 U	0.85 U	0.85 U	0.9 U	0.90 U
Arsenic	MG/KG	0.310 U	0.320 U	0.320 U	0.310 U	0.335 U	0.325 U
Barium	MG/KG	4.30	1.50 U	3.70	3.50	4.3	3.10
Beryllium	MG/KG	0.140 U	0.140 U	0.140 U	0.140 U	0.15 U	0.145 U
Cadmium	MG/KG	0.260 U	0.265 U	0.265 U	0.255 U	0.275 U	0.270 U
Calcium	MG/KG	13.5 U	13.7 U	69.3	13.3 U	39.7	14.0 U
Chromium	MG/KG	2.30	1.70	1.90	0.75 U	1.15 U	3.60
Cobalt	MG/KG	2.10 U	2.10 U	2.10 U	2.05 U	2.25 U	2.15 U
Copper	MG/KG	1.75 U	1.75 U	1.75 U	1.70 U	1.85 U	1.80 U
Iron	MG/KG	1410.0	622.0	1480.0	1230.0	461	2360.0
Lead	MG/KG	3.00 J	2.30 J	2.70 J	1.70 J	1.9	1.50 J
Magnesium	MG/KG	40.1	22.7	41.3	44.6	33.6	63.1
Manganese	MG/KG	5.60	2.90	2.70	5.50	2.3	1.90
Mercury	MG/KG	0.025 U	0.025 U	0.025 U	0.025 U	0.02 U	0.030 U
Nickel	MG/KG	1.45 U	1.50 U	1.50 U	1.45 U	1.55 U	1.50 U
Potassium	MG/KG	32.3 U	32.9 U	32.9 U	31.9 U	34.5 UJ	33.5 U
Selenium	MG/KG	0.270 UJ	0.275 UJ	0.275 UJ	0.265 UJ	0.29 UJ	0.280 UJ
Silver	MG/KG	0.045 UJ	0.045 UJ	0.045 UJ	0.040 UJ	0.34 J	0.045 UJ
Sodium	MG/KG	20.5 UJ	20.8 UJ	20.8 UJ	20.2 UJ	21.4 U	21.2 UJ
Thallium	MG/KG	0.495 U	0.50 U	0.50 U	0.490 U	0.55 U	0.50 U
Vanadium	MG/KG	1.80 U	1.80 U	1.80 U	1.75 U	1.9 U	5.30
Zinc	MG/KG	3.10	1.90 U	1.35 U	1.20 U	3.1	1.35 U
Total Cyanide	MG/KG	0.55 UJ	0.55 UJ	0.55 UJ	0.55 UJ	2.3	0.55 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Client Sample ID:	69-CSA-SB13-00	69-CSA-SB14-00	69-CSA-SB15-00	69-CSA-SB16-00	69-CSA-SB17-00	69-CSA-SB18-00
Laboratory Sample ID:	9401041-18A	9401043-02A	9401043-04A	9401041-20A	9401043-03A	9401025-01A
Date Sampled:	01/07/94			01/08/94		
Percent Solids	92.3	90.6	87.1	91.4	90.3	90.9
	<u>UNITS</u>					
Aluminum	MG/KG 3020.0	1350	800	2630.0	2540	2700
Antimony	MG/KG 0.85 U	0.85 U	0.9 U	0.85 U	0.85 U	0.85 U
Arsenic	MG/KG 0.315 U	0.32 U	0.335 U	0.315 U	0.32 U	0.32 UJ
Barium	MG/KG 3.80	1.5 U	1.55 U	3.00	1.5 U	4.6
Beryllium	MG/KG 0.140 U	0.145 U	0.15 U	0.140 U	0.145 U	0.145 U
Cadmium	MG/KG 0.260 U	0.265 U	0.275 U	0.265 U	0.265 U	0.265 U
Calcium	MG/KG 13.6 U	13.8 U	14.35 U	13.7 U	13.85 U	39.2
Chromium	MG/KG 2.80	0.8 UJ	1.05 U	2.00	1.6 J	3.6
Cobalt	MG/KG 2.10 U	2.15 U	2.25 U	2.10 U	2.15 U	2.15 U
Copper	MG/KG 1.75 U	1.8 U	1.85 U	1.75 U	1.8 U	1.8 U
Iron	MG/KG 1870.0	886	298	1340.0	1690	1730
Lead	MG/KG 1.50 J	3.3	1.1	1.60 J	12.5	2.5
Magnesium	MG/KG 52.5	28.6	6.8 U	57.2	53.3	67.7
Manganese	MG/KG 5.20	2	1.5	4.70	1.6	1.7
Mercury	MG/KG 0.025 U	0.03 U	0.03 U	0.025 U	0.03 U	0.03 UJ
Nickel	MG/KG 1.45 U	1.5 U	1.55 U	1.50 U	1.5 U	1.5 U
Potassium	MG/KG 66.4	33.1 UJ	34.45 UJ	32.8 U	33.2 UJ	33 U
Selenium	MG/KG 0.270 UJ	0.275 UJ	0.285 U	0.275 UJ	0.275 UJ	0.275 U
Silver	MG/KG 0.045 UJ	0.045 UJ	0.045 UJ	0.045 UJ	0.1 J	0.045 UJ
Sodium	MG/KG 20.6 UJ	20.55 U	21.35 U	20.8 UJ	20.6 U	20.9 U
Thallium	MG/KG 0.50 U	0.5 UJ	0.55 U	0.50 U	0.5 U	0.5 U
Vanadium	MG/KG 4.20	1.85 U	1.9 U	1.80 U	1.85 U	3.9
Zinc	MG/KG 1.60 U	2.7	2.8	1.75 U	3.9	2.2
Total Cyanide	MG/KG 0.55 UJ	2.2	2.3	0.55 UJ	2.2	1.1

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-CSA-SB19-00	69-CSA-SB20-00	69-CSA-SB21-00	69-CSA-SB22-00	69-CSA-SB23-00	69-CSA-SB24-00	
Laboratory Sample ID:	9401025-02A	9401036-01A	9401036-02A	9401036-03A	9401036-04A	9401025-03A	
Date Sampled:							
Percent Solids	59.7	88.7	88	91	91.8	93.6	
	UNITS						
Aluminum	MG/KG	1320	986	775	498	368	451
Antimony	MG/KG	1.3 U	0.9 UJ	0.9 UJ	0.85 U	0.85 UJ	0.85 UJ
Arsenic	MG/KG	0.485 UJ	0.325 UJ	0.33 UJ	0.32 UJ	0.315 UJ	0.31 UJ
Barium	MG/KG	5.1	1.55 U	6.8	1.5 U	1.5 U	1.45 U
Beryllium	MG/KG	0.22 U	0.145 U	0.15 U	0.145 U	0.14 U	0.14 U
Cadmium	MG/KG	0.4 U	0.27 U	0.275 U	0.265 U	0.26 U	0.255 U
Calcium	MG/KG	101	56.2	65.2	35.8	54.6	13.35 U
Chromium	MG/KG	3	2.2	1.8	2.1	1.7	2.9
Cobalt	MG/KG	3.25 U	2.2 U	2.2 U	2.15 U	2.1 U	2.05 U
Copper	MG/KG	2.7 U	1.85 U	1.85 U	1.8 U	1.75 U	1.75 U
Iron	MG/KG	1110	671	478	483	235	294
Lead	MG/KG	2.6 J	2.3 J	4.1	1.9 J	1.1	2.1
Magnesium	MG/KG	23.5	22.8	18.1	17.7	17.6	16.6
Manganese	MG/KG	2.8	1.3	0.6 U	0.6 U	0.6 U	2.2
Mercury	MG/KG	0.04 UJ	0.03 UJ	0.03 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Nickel	MG/KG	2.3 U	1.55 U	1.55 U	1.5 U	1.5 U	1.45 U
Potassium	MG/KG	50.5 U	33.8 U	34.1 U	32.95 U	32.7 U	32.05 U
Selenium	MG/KG	0.42 U	0.28 U	1.1	0.275 U	0.27 U	0.265 U
Silver	MG/KG	0.065 UJ	0.045 UJ	0.045 UJ	0.045 UJ	0.045 UJ	0.045 UJ
Sodium	MG/KG	31.85 U	21.4 U	21.6 U	20.9 U	20.7 U	20.3 U
Thallium	MG/KG	0.75 U	0.5 U	0.5 U	0.5 U	0.5 U	0.49 U
Vanadium	MG/KG	2.8 U	1.85 U	1.9 U	1.8 U	1.8 U	1.75 U
Zinc	MG/KG	66	2.2	0.8 U	2.4	1.5	1.5
Total Cyanide	MG/KG	1.7	1.1	1.1	1.1	1.1	1.1

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID: 69-CSA-SB25-00  
 Laboratory Sample ID: 9401043-05A  
 Date Sampled:  
 Percent Solids 91

---

	<u>UNITS</u>	
Aluminum	MG/KG	2990
Antimony	MG/KG	1.7 U
Arsenic	MG/KG	0.64 U
Barium	MG/KG	3.3
Beryllium	MG/KG	0.29 U
Cadmium	MG/KG	0.53 U
Calcium	MG/KG	27.5 U
Chromium	MG/KG	3.1 J
Cobalt	MG/KG	4.3 U
Copper	MG/KG	3.6 U
Iron	MG/KG	1870
Lead	MG/KG	2
Magnesium	MG/KG	57.1
Manganese	MG/KG	2.9
Mercury	MG/KG	0.08 U
Nickel	MG/KG	3 U
Potassium	MG/KG	65.9 UJ
Selenium	MG/KG	0.55 U
Silver	MG/KG	10.2 J
Sodium	MG/KG	40.9 U
Thallium	MG/KG	1 U
Vanadium	MG/KG	3.6 U
Zinc	MG/KG	2.7
Total Cyanide	MG/KG	2.2

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**CHEMICAL STORAGE AREA SURFACE SOIL**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**TAL INORGANICS**

Client Sample ID:					NORMAL	LOG-NORMAL
Laboratory Sample ID:					UPPER 95%	UPPER 95%
Date Sampled:		MAXIMUM	ARITHMETIC	STANDARD	CONFIDENCE	CONFIDENCE
Percent Solids		DETECTED	MEAN	DEVIATION	INTERVAL	INTERVAL
	UNITS					
Aluminum	MG/KG	3370	1785.0	930.2	2103.3	2472.3
Antimony	MG/KG	ND	NA	NA	NA	NA
Arsenic	MG/KG	ND	NA	NA	NA	NA
Barium	MG/KG	6.8	3.2	1.4	3.7	4.0
Beryllium	MG/KG	ND	NA	NA	NA	NA
Cadmium	MG/KG	ND	NA	NA	NA	NA
Calcium	MG/KG	101	28.2	23.8	36.4	37.4
Chromium	MG/KG	3.6	1.9	0.9	2.2	2.4
Cobalt	MG/KG	ND	NA	NA	NA	NA
Copper	MG/KG	ND	NA	NA	NA	NA
Iron	MG/KG	2360	1063.8	580.1	1262.3	1472.1
Lead	MG/KG	12.5	2.5	2.2	3.3	3.0
Magnesium	MG/KG	67.7	37.5	18.7	43.9	49.9
Manganese	MG/KG	15.5	3.6	3.2	4.7	5.6
Mercury	MG/KG	ND	NA	NA	NA	NA
Nickel	MG/KG	ND	NA	NA	NA	NA
Potassium	MG/KG	66.4	37.6	11.3	41.5	41.0
Selenium	MG/KG	1.1	0.32	0.17	0.38	0.36
Silver	MG/KG	10.2 J	0.47	2.03	1.16	0.25
Sodium	MG/KG	ND	NA	NA	NA	NA
Thallium	MG/KG	ND	NA	NA	NA	NA
Vanadium	MG/KG	5.3	2.2	1.0	2.6	2.5
Zinc	MG/KG	66	4.5	12.8	8.9	4.3
Total Cyanide	MG/KG	2.3	1.1	0.7	1.3	1.4

**APPENDIX P.3**  
**SITE 69 SUBSURFACE SOIL ORGANICS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3

UNITS

SEMIVOLATILES

	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
1,2-Dichlorobenzene	UG/KG	251 U	218 U	175.0 U	198.5 U
1,2,4-Trichlorobenzene	UG/KG	251 U	218 U	175.0 U	198.5 U
1,3-Dichlorobenzene	UG/KG	251 U	218 U	175.0 U	198.5 U
1,4-Dichlorobenzene	UG/KG	251 U	218 U	175.0 U	198.5 U
1,4-Dithiane	UG/KG	NA	NA	NA	NA
1,4-Oxathiane	UG/KG	NA	NA	NA	NA
2-Chloronaphthalene	UG/KG	251 U	218 U	175.0 U	198.5 U
2-Chlorophenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2-Methylnaphthalene	UG/KG	251 U	218 U	175.0 U	198.5 U
2-Methylphenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2-Nitroaniline	UG/KG	610 U	530 U	424.0 U	481.5 U
2-Nitrophenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	251 U	218 U	175.0 U	198.5 U
2,4-Dichlorophenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2,4-Dimethylphenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2,4-Dinitrophenol	UG/KG	610 U	530 U	424.0 U	481.5 U
2,4-Dinitrotoluene	UG/KG	251 U	218 U	175.0 U	198.5 U
2,4,5-Trichlorophenol	UG/KG	610 U	530 U	424.0 U	481.5 U
2,4,6-Trichlorophenol	UG/KG	251 U	218 U	175.0 U	198.5 U
2,6-Dinitrotoluene	UG/KG	251 U	218 U	175.0 U	198.5 U
3-Nitroaniline	UG/KG	610 U	530 U	424.0 U	481.5 U
3,3'-Dichlorobenzidine	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Bromophenyl-phenylether	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Chloro-3-methylphenol	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Chloroaniline	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Chlorophenyl phenyl ether	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Methylphenol	UG/KG	251 U	218 U	175.0 U	198.5 U
4-Nitroaniline	UG/KG	610 U	530 U	424.0 U	481.5 U
4-Nitrophenol	UG/KG	610 U	530 U	424.0 U	481.5 U
4,6-Dinitro-2-methylphenol	UG/KG	610 U	530 U	424.0 U	481.5 U
Acenaphthene	UG/KG	251 U	218 U	175.0 U	198.5 U
Acenaphthylene	UG/KG	251 U	218 U	175.0 U	198.5 U
Acetophenone	UG/KG	NA	NA	NA	NA
Anthracene	UG/KG	251 U	218 U	175.0 U	198.5 U
Benzo[a]anthracene	UG/KG	251 U	218 U	175.0 U	198.5 U
Benzo[a]pyrene	UG/KG	251 U	218 U	175.0 U	198.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3

UNITS

SEMIVOLATILES Cont.

	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
Benzo[b]fluoranthene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Benzo[g,h,i]perylene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Benzo[k]fluoranthene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
bis(2-Chloroethoxy) methane	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
bis(2-Chloroethyl) ether	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
bis(2-Ethylhexyl)phthalate	UG/KG 251 U	218 U	175.0 U	198.5 U	53.0 J
Butyl benzyl phthalate	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Carbazole	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Chloroacetophenone	UG/KG NA	NA	NA	NA	NA
Chrysene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Dibenzofuran	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Dibenz[a,h]anthracene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Diethylphthalate	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Dimethyl phthalate	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
di-n-Butylphthalate	UG/KG 88 J	120 J	175.0 U	200.0 U	58.0 J
di-n-Octylphthalate	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Fluoranthene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Fluorene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Hexachlorobenzene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Hexachlorobutadiene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Hexachlorocyclopentadiene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Hexachloroethane	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Hydroxyacetophenone	UG/KG NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Isophorone	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Naphthalene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Nitrobenzene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
N-Nitroso-di-n-propylamine	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
N-nitrosodiphenylamine	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Pentachlorophenol	UG/KG 610 U	530 U	424.0 U	481.5 U	545.0 U
Phenanthrene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Phenol	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U
Pyrene	UG/KG 251 U	218 U	175.0 U	198.5 U	224.5 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3

	UNITS					
<b>YOLATILES</b>						
Chloromethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Bromomethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Vinyl chloride	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Chloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Methylene chloride	UG/KG	11 J	6 J	5.50 U	6.0 U	58.0
Acetone	UG/KG	2200 J	6.6 UJ	13.0 J	3200.0 J	4100.0 J
Carbon Disulfide	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,1-Dichloroethene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,1-Dichloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,2-Dichloroethene(total)	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Chloroform	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,2-Dichloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
2-Butanone	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,1,1-Trichloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	2.00 J
Carbon tetrachloride	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Bromodichloromethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,2-Dichloropropane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
cis-1,3-Dichloropropene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Trichloroethene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Dibromochloromethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,1,2-Trichloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Benzene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
trans-1,3-Dichloropropene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Bromoform	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
4-Methyl-2-pentanone	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
2-Hexanone	UG/KG	5.9 U	6.6 U	R	6.0 U	6.9 U
Tetrachloroethene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
1,1,2,2-Tetrachloroethane	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Toluene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Chlorobenzene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Ethylbenzene	UG/KG	5.9 U	6.6 U	2.0 J	6.0 U	6.9 U
Styrene	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U
Xylenes (total)	UG/KG	5.9 U	6.6 U	5.3 U	6.0 U	6.9 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3

	UNITS					
PESTICIDE/PCBS						
alpha-BHC	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
beta-BHC	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
delta-BHC	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Lindane (gamma-BHC)	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Heptachlor	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Aldrin	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Heptachlor epoxide	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Endosulfan I	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Dieldrin	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
4,4'-DDE	UG/KG	1.965 UJ	2.18 UJ	1.20 J	1.99 UJ	2.26 UJ
Endrin	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
Endosulfan II	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
4,4'-DDD	UG/KG	1.965 UJ	2.18 UJ	5.70 J	1.99 UJ	2.26 UJ
Endosulfan sulfate	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
4,4'-DDT	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
Methoxychlor	UG/KG	10.1 UJ	11.2 UJ	9.1 UJ	10.3 UJ	11.7 UJ
Endrin ketone	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
Endrin aldehyde	UG/KG	1.965 UJ	2.18 UJ	1.76 UJ	1.99 UJ	2.26 UJ
alpha-Chlordane	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
gamma-Chlordane	UG/KG	1.01 UJ	1.12 UJ	0.91 UJ	1.03 UJ	1.17 UJ
Toxaphene	UG/KG	101 UJ	112 UJ	90.5 UJ	102.5 UJ	116.5 UJ
Aroclor 1016	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Aroclor 1221	UG/KG	39.85 UJ	44.2 UJ	35.7 UJ	40.4 UJ	45.9 UJ
Aroclor 1232	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Aroclor 1242	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Aroclor 1248	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Aroclor 1254	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Aroclor 1260	UG/KG	19.65 UJ	21.8 UJ	17.6 UJ	19.9 UJ	22.6 UJ
Thiodiglycol	MG/KG	NA	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
Laboratory Sample ID:	9401041-02A	9401025-05A	9401052-03A	9401052-04A	9401054-01A
Date Sampled:	01/07/94	01/20/94	01/09/94	01/09/94	01/08/94
Percent Solids	85.3	81.2	89.6	86.2	76.3

UNITS

SEMIVOLATILES

	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
1,2-Dichlorobenzene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
1,2,4-Trichlorobenzene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
1,3-Dichlorobenzene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
1,4-Dichlorobenzene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
1,4-Dithiane	UG/KG	NA	NA	NA	NA
1,4-Oxathiane	UG/KG	NA	NA	NA	NA
2-Chloronaphthalene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2-Chlorophenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2-Methylnaphthalene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2-Methylphenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2-Nitroaniline	UG/KG	468.0 U	492 U	444.0 U	465.0 U
2-Nitrophenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,4-Dichlorophenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,4-Dimethylphenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,4-Dinitrophenol	UG/KG	468.0 U	492 U	444.0 U	465.0 U
2,4-Dinitrotoluene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,4,5-Trichlorophenol	UG/KG	468.0 U	492 U	444.0 U	465.0 U
2,4,6-Trichlorophenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
2,6-Dinitrotoluene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
3-Nitroaniline	UG/KG	468.0 U	492 U	444.0 U	465.0 U
3,3'-Dichlorobenzidine	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Bromophenyl-phenylether	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Chloro-3-methylphenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Chloroaniline	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Chlorophenyl phenyl ether	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Methylphenol	UG/KG	193.0 U	203 U	183.0 U	191.5 U
4-Nitroaniline	UG/KG	468.0 U	492 U	444.0 U	465.0 U
4-Nitrophenol	UG/KG	468.0 U	492 U	444.0 U	465.0 U
4,6-Dinitro-2-methylphenol	UG/KG	468.0 U	492 U	444.0 U	465.0 U
Acenaphthene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
Acenaphthylene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
Acetophenone	UG/KG	NA	NA	NA	NA
Anthracene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
Benzo[a]anthracene	UG/KG	193.0 U	203 U	183.0 U	191.5 U
Benzo[a]pyrene	UG/KG	193.0 U	203 U	183.0 U	191.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
Laboratory Sample ID:	9401041-02A	9401025-05A	9401052-03A	9401052-04A	9401054-01A
Date Sampled:	01/07/94	01/20/94	01/09/94	01/09/94	01/08/94
Percent Solids	85.3	81.2	89.6	86.2	76.3

UNITS

SEMIVOLATILES Cont.

Compound	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
Benzo[b]fluoranthene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Benzo[g,h,i]perylene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Benzo[k]fluoranthene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
bis(2-Chloroethoxy) methane	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
bis(2-Chloroethyl) ether	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
bis(2-Ethylhexyl)phthalate	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Butyl benzyl phthalate	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Carbazole	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Chloroacetophenone	UG/KG NA	NA	NA	NA	NA
Chrysene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Dibenzofuran	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Dibenz[a,h]anthracene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Diethylphthalate	UG/KG 193.0 U	203 U	183.0 U	260.0 J	218.0 U
Dimethyl phthalate	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
di-n-Butylphthalate	UG/KG 53.0 J	98 J	183.0 U	191.5 U	218.0 U
di-n-Octylphthalate	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Fluoranthene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Fluorene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Hexachlorobenzene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Hexachlorobutadiene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Hexachlorocyclopentadiene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Hexachloroethane	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Hydroxyacetophenone	UG/KG NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Isophorone	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Naphthalene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Nitrobenzene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
N-Nitroso-di-n-propylamine	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
N-nitrosodiphenylamine	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Pentachlorophenol	UG/KG 468.0 U	492 U	444.0 U	465.0 U	530.0 U
Phenanthrene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Phenol	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U
Pyrene	UG/KG 193.0 U	203 U	183.0 U	191.5 U	218.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
Laboratory Sample ID:	9401041-02A	9401025-05A	9401052-03A	9401052-04A	9401054-01A
Date Sampled:	01/07/94	01/20/94	01/09/94	01/09/94	01/08/94
Percent Solids	85.3	81.2	89.6	86.2	76.3

	<u>UNITS</u>					
<u>VOLATILES</u>						
Chloromethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Bromomethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Vinyl chloride	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Chloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Methylene chloride	UG/KG	52.0	6 U	15.0 J	11.0 J	8.00 J
Acetone	UG/KG	28000.0 J	45000	15000.0 J	5.8 UJ	1000.0 J
Carbon Disulfide	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,1-Dichloroethene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,1-Dichloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,2-Dichloroethene(total)	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Chloroform	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,2-Dichloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
2-Butanone	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,1,1-Trichloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Carbon tetrachloride	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Bromodichloromethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,2-Dichloropropane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
cis-1,3-Dichloropropene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Trichloroethene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Dibromochloromethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,1,2-Trichloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Benzene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
trans-1,3-Dichloropropene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Bromoform	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
4-Methyl-2-pentanone	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
2-Hexanone	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Tetrachloroethene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Toluene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Chlorobenzene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Ethylbenzene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	2.00 J
Styrene	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U
Xylenes (total)	UG/KG	5.9 U	6.15 U	5.6 UJ	5.8 UJ	6.6 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-04	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01
Laboratory Sample ID:	9401041-02A	9401025-05A	9401052-03A	9401052-04A	9401054-01A
Date Sampled:	01/07/94	01/20/94	01/09/94	01/09/94	01/08/94
Percent Solids	85.3	81.2	89.6	86.2	76.3

	UNITS					
PESTICIDE/PCBS						
alpha-BHC	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
beta-BHC	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
delta-BHC	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Lindane (gamma-BHC)	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Heptachlor	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Aldrin	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Heptachlor epoxide	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Endosulfan I	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Dieldrin	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
4,4'-DDE	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
Endrin	UG/KG	1.94 UJ	2.755 UJ	1.20 J	1.92 UJ	2.16 UJ
Endosulfan II	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
4,4'-DDD	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
Endosulfan sulfate	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
4,4'-DDT	UG/KG	1.94 UJ	2.755 UJ	1.60 J	1.92 UJ	2.16 UJ
Methoxychlor	UG/KG	10.0 UJ	14.2 UJ	9.5 UJ	9.9 UJ	11.2 UJ
Endrin ketone	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
Endrin aldehyde	UG/KG	1.94 UJ	2.755 UJ	1.84 UJ	1.92 UJ	2.16 UJ
alpha-Chlordane	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
gamma-Chlordane	UG/KG	1.00 UJ	1.42 UJ	0.95 UJ	0.99 UJ	1.12 UJ
Toxaphene	UG/KG	100.0 UJ	142 UJ	94.5 UJ	99.0 UJ	111.5 UJ
Aroclor 1016	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Aroclor 1221	UG/KG	39.4 UJ	56 UJ	37.2 UJ	39.0 UJ	43.9 UJ
Aroclor 1232	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Aroclor 1242	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Aroclor 1248	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Aroclor 1254	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Aroclor 1260	UG/KG	19.4 UJ	27.55 UJ	18.4 UJ	19.2 UJ	21.6 UJ
Thiodiglycol	MG/KG	NA	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
Laboratory Sample ID:	9503202-01	9503185-02	9503186-01	9503186-08	9503186-06
Date Sampled:	03/26/95	03/23/95	03/21/95	03/22/95	03/22/95
Percent Solids	NA	84.5	82	80.3	80.3

UNITS

SEMIVOLATILES

	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
1,2-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	NA	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,4-Dithiane	UG/KG	198 U	5 UJ	201.5 U	206 U
1,4-Oxathiane	UG/KG	198 U	5 UJ	201.5 U	206 U
2-Chloronaphthalene	UG/KG	NA	NA	NA	NA
2-Chlorophenol	UG/KG	NA	NA	NA	NA
2-Methylnaphthalene	UG/KG	NA	NA	NA	NA
2-Methylphenol	UG/KG	NA	NA	NA	NA
2-Nitroaniline	UG/KG	NA	NA	NA	NA
2-Nitrophenol	UG/KG	NA	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	NA	NA	NA	NA
2,4-Dichlorophenol	UG/KG	NA	NA	NA	NA
2,4-Dimethylphenol	UG/KG	NA	NA	NA	NA
2,4-Dinitrophenol	UG/KG	NA	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	NA	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	NA	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	NA	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	NA	NA	NA	NA
3-Nitroaniline	UG/KG	NA	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	NA	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	NA	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	NA	NA	NA	NA
4-Chloroaniline	UG/KG	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	NA	NA	NA	NA
4-Methylphenol	UG/KG	NA	NA	NA	NA
4-Nitroaniline	UG/KG	NA	NA	NA	NA
4-Nitrophenol	UG/KG	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	NA	NA	NA	NA
Acenaphthene	UG/KG	NA	NA	NA	NA
Acenaphthylene	UG/KG	NA	NA	NA	NA
Acetophenone	UG/KG	5 UJ	198 U	201.5 U	206 U
Anthracene	UG/KG	NA	NA	NA	NA
Benzo[a]anthracene	UG/KG	NA	NA	NA	NA
Benzo[a]pyrene	UG/KG	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
Laboratory Sample ID:	9503202-01	9503185-02	9503186-01	9503186-08	9503186-06
Date Sampled:	03/26/95	03/23/95	03/21/95	03/22/95	03/22/95
Percent Solids	NA	84.5	82	80.3	80.3

UNITS

SEMIVOLATILES Cont.

	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
Benzo[b]fluoranthene	UG/KG NA	NA	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG NA	NA	NA	NA	NA
Benzo[k]fluoranthene	UG/KG NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG NA	NA	NA	NA	NA
Butyl benzyl phthalate	UG/KG NA	NA	NA	NA	NA
Carbazole	UG/KG NA	NA	NA	NA	NA
Chloroacetophenone	UG/KG 5 U	198 U	201.5 U	206 U	206 U
Chrysene	UG/KG NA	NA	NA	NA	NA
Dibenzofuran	UG/KG NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG NA	NA	NA	NA	NA
Diethylphthalate	UG/KG NA	NA	NA	NA	NA
Dimethyl phthalate	UG/KG NA	NA	NA	NA	NA
di-n-Butylphthalate	UG/KG NA	NA	NA	NA	NA
di-n-Octylphthalate	UG/KG NA	NA	NA	NA	NA
Fluoranthene	UG/KG NA	NA	NA	NA	NA
Fluorene	UG/KG NA	NA	NA	NA	NA
Hexachlorobenzene	UG/KG NA	NA	NA	NA	NA
Hexachlorobutadiene	UG/KG NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG NA	NA	NA	NA	NA
Hexachloroethane	UG/KG NA	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG 25 U	45 J	1005 U	1030 U	1030 U
Indeno[1,2,3-cd]pyrene	UG/KG NA	NA	NA	NA	NA
Isophorone	UG/KG NA	NA	NA	NA	NA
Naphthalene	UG/KG NA	NA	NA	NA	NA
Nitrobenzene	UG/KG NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG NA	NA	NA	NA	NA
N-nitrosodiphenylamine	UG/KG NA	NA	NA	NA	NA
Pentachlorophenol	UG/KG NA	NA	NA	NA	NA
Phenanthrene	UG/KG NA	NA	NA	NA	NA
Phenol	UG/KG NA	NA	NA	NA	NA
Pyrene	UG/KG NA	NA	NA	NA	NA



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
Laboratory Sample ID:	9503202-01	9503185-02	9503186-01	9503186-08	9503186-06
Date Sampled:	03/26/95	03/23/95	03/21/95	03/22/95	03/22/95
Percent Solids	NA	84.5	82	80.3	80.3

	UNITS				
<u>VOLATILES</u>					
Chloromethane	UG/KG	NA	5.5 U	6 U	7 U
Bromomethane	UG/KG	NA	5.5 U	6 U	7 U
Vinyl chloride	UG/KG	NA	5.5 U	6 U	7 U
Chloroethane	UG/KG	NA	5.5 U	6 U	7 U
Methylene chloride	UG/KG	NA	5.5 U	6 U	7 U
Acetone	UG/KG	NA	5.5 U	6 U	7 U
Carbon Disulfide	UG/KG	NA	5.5 U	6 U	7 U
1,1-Dichloroethene	UG/KG	NA	5.5 U	6 U	7 U
1,1-Dichloroethane	UG/KG	NA	5.5 U	6 U	7 U
1,2-Dichloroethene(total)	UG/KG	NA	5.5 U	2 J	7 U
Chloroform	UG/KG	NA	5.5 U	6 U	7 U
1,2-Dichloroethane	UG/KG	NA	5.5 U	6 U	7 U
2-Butanone	UG/KG	NA	5.5 U	6 U	7 U
1,1,1-Trichloroethane	UG/KG	NA	5.5 U	6 U	7 U
Carbon tetrachloride	UG/KG	NA	5.5 U	6 U	7 U
Bromodichloromethane	UG/KG	NA	5.5 U	6 U	7 U
1,2-Dichloropropane	UG/KG	NA	5.5 U	6 U	7 U
cis-1,3-Dichloropropene	UG/KG	NA	5.5 U	6 U	7 U
Trichloroethene	UG/KG	NA	5.5 U	6 U	7 U
Dibromochloromethane	UG/KG	NA	5.5 U	6 U	7 U
1,1,2-Trichloroethane	UG/KG	NA	5.5 U	6 U	7 U
Benzene	UG/KG	NA	5.5 U	6 U	7 U
trans-1,3-Dichloropropene	UG/KG	NA	5.5 U	6 U	7 U
Bromoform	UG/KG	NA	5.5 U	6 U	7 U
4-Methyl-2-pentanone	UG/KG	NA	5.5 U	6 U	7 U
2-Hexanone	UG/KG	NA	5.5 U	6 U	7 U
Tetrachloroethene	UG/KG	NA	5.5 U	6 U	7 U
1,1,2,2-Tetrachloroethane	UG/KG	NA	5.5 U	6 U	7 U
Toluene	UG/KG	NA	5.5 U	6 U	7 U
Chlorobenzene	UG/KG	NA	5.5 U	6 U	7 U
Ethylbenzene	UG/KG	NA	5.5 U	6 U	7 U
Styrene	UG/KG	NA	5.5 U	6 U	7 U
Xylenes (total)	UG/KG	NA	5.5 U	6 U	7 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW15-01	69-GW15 IW-01	69-DA-HP01-03	69-DA-HP02-01	69-DA-HP03-02
Laboratory Sample ID:	9503202-01	9503185-02	9503186-01	9503186-08	9503186-06
Date Sampled:	03/26/95	03/23/95	03/21/95	03/22/95	03/22/95
Percent Solids	NA	84.5	82	80.3	80.3

	UNITS					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	NA	NA	NA	NA	NA
beta-BHC	UG/KG	NA	NA	NA	NA	NA
delta-BHC	UG/KG	NA	NA	NA	NA	NA
Lindane (gamma-BHC)	UG/KG	NA	NA	NA	NA	NA
Heptachlor	UG/KG	NA	NA	NA	NA	NA
Aldrin	UG/KG	NA	NA	NA	NA	NA
Heptachlor epoxide	UG/KG	NA	NA	NA	NA	NA
Endosulfan I	UG/KG	NA	NA	NA	NA	NA
Dieldrin	UG/KG	NA	NA	NA	NA	NA
4,4'-DDE	UG/KG	NA	NA	NA	NA	NA
Endrin	UG/KG	NA	NA	NA	NA	NA
Endosulfan II	UG/KG	NA	NA	NA	NA	NA
4,4'-DDD	UG/KG	NA	NA	NA	NA	NA
Endosulfan sulfate	UG/KG	NA	NA	NA	NA	NA
4,4'-DDT	UG/KG	NA	NA	NA	NA	NA
Methoxychlor	UG/KG	NA	NA	NA	NA	NA
Endrin ketone	UG/KG	NA	NA	NA	NA	NA
Endrin aldehyde	UG/KG	NA	NA	NA	NA	NA
alpha-Chlordane	UG/KG	NA	NA	NA	NA	NA
gamma-Chlordane	UG/KG	NA	NA	NA	NA	NA
Toxaphene	UG/KG	NA	NA	NA	NA	NA
Aroclor 1016	UG/KG	NA	NA	NA	NA	NA
Aroclor 1221	UG/KG	NA	NA	NA	NA	NA
Aroclor 1232	UG/KG	NA	NA	NA	NA	NA
Aroclor 1242	UG/KG	NA	NA	NA	NA	NA
Aroclor 1248	UG/KG	NA	NA	NA	NA	NA
Aroclor 1254	UG/KG	NA	NA	NA	NA	NA
Aroclor 1260	UG/KG	NA	NA	NA	NA	NA
Thiodiglycol	MG/KG	25 U	2.33 UJ	2.405 UJ	2.455 UJ	2.455 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
Laboratory Sample ID:	9503186-07	9503186-10	9503186-02	9503186-03	9503185-05
Date Sampled:	03/22/95	03/21/95	03/21/95	03/21/95	03/23/95
Percent Solids	83.1	81.4	84.1	83.2	83.8

UNITS

SEMIVOLATILES

	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
1,2-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	NA	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	NA	NA	NA	NA
1,4-Dithiane	UG/KG	198 U	203 U	198 U	198 U
1,4-Oxathiane	UG/KG	198 U	203 U	198 U	198 U
2-Chloronaphthalene	UG/KG	NA	NA	NA	NA
2-Chlorophenol	UG/KG	NA	NA	NA	NA
2-Methylnaphthalene	UG/KG	NA	NA	NA	NA
2-Methylphenol	UG/KG	NA	NA	NA	NA
2-Nitroaniline	UG/KG	NA	NA	NA	NA
2-Nitrophenol	UG/KG	NA	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	NA	NA	NA	NA
2,4-Dichlorophenol	UG/KG	NA	NA	NA	NA
2,4-Dimethylphenol	UG/KG	NA	NA	NA	NA
2,4-Dinitrophenol	UG/KG	NA	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	NA	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	NA	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	NA	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	NA	NA	NA	NA
3-Nitroaniline	UG/KG	NA	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	NA	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	NA	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	NA	NA	NA	NA
4-Chloroaniline	UG/KG	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	NA	NA	NA	NA
4-Methylphenol	UG/KG	NA	NA	NA	NA
4-Nitroaniline	UG/KG	NA	NA	NA	NA
4-Nitrophenol	UG/KG	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	NA	NA	NA	NA
Acenaphthene	UG/KG	NA	NA	NA	NA
Acenaphthylene	UG/KG	NA	NA	NA	NA
Acetophenone	UG/KG	198 U	203 U	198 U	198 U
Anthracene	UG/KG	NA	NA	NA	NA
Benzo[a]anthracene	UG/KG	NA	NA	NA	NA
Benzo[a]pyrene	UG/KG	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
Laboratory Sample ID:	9503186-07	9503186-10	9503186-02	9503186-03	9503185-05
Date Sampled:	03/22/95	03/21/95	03/21/95	03/21/95	03/23/95
Percent Solids	83.1	81.4	84.1	83.2	83.8

UNITS

SEMIVOLATILES Cont.

	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
Benzo[b]fluoranthene	UG/KG	NA	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG	NA	NA	NA	NA
Benzo[k]fluoranthene	UG/KG	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	NA	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	NA	NA	NA	NA
Butyl benzyl phthalate	UG/KG	NA	NA	NA	NA
Carbazole	UG/KG	NA	NA	NA	NA
Chloroacetophenone	UG/KG	198 U	203 U	198 U	198 U
Chrysene	UG/KG	NA	NA	NA	NA
Dibenzofuran	UG/KG	NA	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	NA	NA	NA	NA
Diethylphthalate	UG/KG	NA	NA	NA	NA
Dimethyl phthalate	UG/KG	NA	NA	NA	NA
di-n-Butylphthalate	UG/KG	NA	NA	NA	NA
di-n-Octylphthalate	UG/KG	NA	NA	NA	NA
Fluoranthene	UG/KG	NA	NA	NA	NA
Fluorene	UG/KG	NA	NA	NA	NA
Hexachlorobenzene	UG/KG	NA	NA	NA	NA
Hexachlorobutadiene	UG/KG	NA	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	NA	NA	NA	NA
Hexachloroethane	UG/KG	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG	990 U	1015 U	990 U	990 U
Indeno[1,2,3-cd]pyrene	UG/KG	NA	NA	NA	NA
Isophorone	UG/KG	NA	NA	NA	NA
Naphthalene	UG/KG	NA	NA	NA	NA
Nitrobenzene	UG/KG	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	NA	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	NA	NA	NA	NA
Pentachlorophenol	UG/KG	NA	NA	NA	NA
Phenanthrene	UG/KG	NA	NA	NA	NA
Phenol	UG/KG	NA	NA	NA	NA
Pyrene	UG/KG	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
Laboratory Sample ID:	9503186-07	9503186-10	9503186-02	9503186-03	9503185-05
Date Sampled:	03/22/95	03/21/95	03/21/95	03/21/95	03/23/95
Percent Solids	83.1	81.4	84.1	83.2	83.8

UNITS

VOLATILES

	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03	
Chloromethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Bromomethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Vinyl chloride	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Chloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Methylene chloride	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Acetone	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Carbon Disulfide	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,1-Dichloroethene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,1-Dichloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,2-Dichloroethene(total)	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Chloroform	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,2-Dichloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
2-Butanone	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,1,1-Trichloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Carbon tetrachloride	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Bromodichloromethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,2-Dichloropropane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
cis-1,3-Dichloropropene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Trichloroethene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Dibromochloromethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,1,2-Trichloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Benzene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
trans-1,3-Dichloropropene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Bromoform	UG/KG	6 U	6 U	6 U	5.5 U	6 U
4-Methyl-2-pentanone	UG/KG	6 U	6 U	6 U	5.5 U	6 U
2-Hexanone	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Tetrachloroethene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Toluene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Chlorobenzene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Ethylbenzene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Styrene	UG/KG	6 U	6 U	6 U	5.5 U	6 U
Xylenes (total)	UG/KG	6 U	6 U	6 U	5.5 U	6 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-HP04-02	69-DA-HP05-02	69-DA-HP06-01	69-DA-HP07-03	69-DA-HP08-03
Laboratory Sample ID:	9503186-07	9503186-10	9503186-02	9503186-03	9503185-05
Date Sampled:	03/22/95	03/21/95	03/21/95	03/21/95	03/23/95
Percent Solids	83.1	81.4	84.1	83.2	83.8

	<u>UNITS</u>					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	NA	NA	NA	NA	NA
beta-BHC	UG/KG	NA	NA	NA	NA	NA
delta-BHC	UG/KG	NA	NA	NA	NA	NA
Lindane (gamma-BHC)	UG/KG	NA	NA	NA	NA	NA
Heptachlor	UG/KG	NA	NA	NA	NA	NA
Aldrin	UG/KG	NA	NA	NA	NA	NA
Heptachlor epoxide	UG/KG	NA	NA	NA	NA	NA
Endosulfan I	UG/KG	NA	NA	NA	NA	NA
Dieldrin	UG/KG	NA	NA	NA	NA	NA
4,4'-DDE	UG/KG	NA	NA	NA	NA	NA
Endrin	UG/KG	NA	NA	NA	NA	NA
Endosulfan II	UG/KG	NA	NA	NA	NA	NA
4,4'-DDD	UG/KG	NA	NA	NA	NA	NA
Endosulfan sulfate	UG/KG	NA	NA	NA	NA	NA
4,4'-DDT	UG/KG	NA	NA	NA	NA	NA
Methoxychlor	UG/KG	NA	NA	NA	NA	NA
Endrin ketone	UG/KG	NA	NA	NA	NA	NA
Endrin aldehyde	UG/KG	NA	NA	NA	NA	NA
alpha-Chlordane	UG/KG	NA	NA	NA	NA	NA
gamma-Chlordane	UG/KG	NA	NA	NA	NA	NA
Toxaphene	UG/KG	NA	NA	NA	NA	NA
Aroclor 1016	UG/KG	NA	NA	NA	NA	NA
Aroclor 1221	UG/KG	NA	NA	NA	NA	NA
Aroclor 1232	UG/KG	NA	NA	NA	NA	NA
Aroclor 1242	UG/KG	NA	NA	NA	NA	NA
Aroclor 1248	UG/KG	NA	NA	NA	NA	NA
Aroclor 1254	UG/KG	NA	NA	NA	NA	NA
Aroclor 1260	UG/KG	NA	NA	NA	NA	NA
Thiodiglycol	MG/KG	2.37 UJ	2.42 UJ	2.345 UJ	2.37 UJ	2.35 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-HP09-03  
 Laboratory Sample ID: 9503186-04  
 Date Sampled: 03/21/95  
 Percent Solids 82

<u>SEMIVOLATILES</u>	<u>UNITS</u>	
1,2-Dichlorobenzene	UG/KG	NA
1,2,4-Trichlorobenzene	UG/KG	NA
1,3-Dichlorobenzene	UG/KG	NA
1,4-Dichlorobenzene	UG/KG	NA
1,4-Dithiane	UG/KG	201.5 U
1,4-Oxathiane	UG/KG	201.5 U
2-Chloronaphthalene	UG/KG	NA
2-Chlorophenol	UG/KG	NA
2-Methylnaphthalene	UG/KG	NA
2-Methylphenol	UG/KG	NA
2-Nitroaniline	UG/KG	NA
2-Nitrophenol	UG/KG	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	NA
2,4-Dichlorophenol	UG/KG	NA
2,4-Dimethylphenol	UG/KG	NA
2,4-Dinitrophenol	UG/KG	NA
2,4-Dinitrotoluene	UG/KG	NA
2,4,5-Trichlorophenol	UG/KG	NA
2,4,6-Trichlorophenol	UG/KG	NA
2,6-Dinitrotoluene	UG/KG	NA
3-Nitroaniline	UG/KG	NA
3,3'-Dichlorobenzidine	UG/KG	NA
4-Bromophenyl-phenylether	UG/KG	NA
4-Chloro-3-methylphenol	UG/KG	NA
4-Chloroaniline	UG/KG	NA
4-Chlorophenyl phenyl ether	UG/KG	NA
4-Methylphenol	UG/KG	NA
4-Nitroaniline	UG/KG	NA
4-Nitrophenol	UG/KG	NA
4,6-Dinitro-2-methylphenol	UG/KG	NA
Acenaphthene	UG/KG	NA
Acenaphthylene	UG/KG	NA
Acetophenone	UG/KG	201.5 U
Anthracene	UG/KG	NA
Benzo[a]anthracene	UG/KG	NA
Benzo[a]pyrene	UG/KG	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-HP09-03  
 Laboratory Sample ID: 9503186-04  
 Date Sampled: 03/21/95  
 Percent Solids 82

	<u>UNITS</u>	
<u>SEMIVOLATILES Cont.</u>		
Benzo[b]fluoranthene	UG/KG	NA
Benzo[g,h,i]perylene	UG/KG	NA
Benzo[k]fluoranthene	UG/KG	NA
bis(2-Chloroethoxy) methane	UG/KG	NA
bis(2-Chloroethyl) ether	UG/KG	NA
bis(2-Ethylhexyl)phthalate	UG/KG	NA
Butyl benzyl phthalate	UG/KG	NA
Carbazole	UG/KG	NA
Chloroacetophenone	UG/KG	201.5 U
Chrysene	UG/KG	NA
Dibenzofuran	UG/KG	NA
Dibenz[a,h]anthracene	UG/KG	NA
Diethylphthalate	UG/KG	NA
Dimethyl phthalate	UG/KG	NA
di-n-Butylphthalate	UG/KG	NA
di-n-Octylphthalate	UG/KG	NA
Fluoranthene	UG/KG	NA
Fluorene	UG/KG	NA
Hexachlorobenzene	UG/KG	NA
Hexachlorobutadiene	UG/KG	NA
Hexachlorocyclopentadiene	UG/KG	NA
Hexachloroethane	UG/KG	NA
Hydroxyacetophenone	UG/KG	1005 U
Indeno[1,2,3-cd]pyrene	UG/KG	NA
Isophorone	UG/KG	NA
Naphthalene	UG/KG	NA
Nitrobenzene	UG/KG	NA
N-Nitroso-di-n-propylamine	UG/KG	NA
N-nitrosodiphenylamine	UG/KG	NA
Pentachlorophenol	UG/KG	NA
Phenanthrene	UG/KG	NA
Phenol	UG/KG	NA
Pyrene	UG/KG	NA



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-HP09-03  
 Laboratory Sample ID: 9503186-04  
 Date Sampled: 03/21/95  
 Percent Solids 82

<u>VOLATILES</u>	<u>UNITS</u>	
Chloromethane	UG/KG	6 U
Bromomethane	UG/KG	6 U
Vinyl chloride	UG/KG	6 U
Chloroethane	UG/KG	6 U
Methylene chloride	UG/KG	6 U
Acetone	UG/KG	6 U
Carbon Disulfide	UG/KG	6 U
1,1-Dichloroethene	UG/KG	6 U
1,1-Dichloroethane	UG/KG	6 U
1,2-Dichloroethene(total)	UG/KG	6 U
Chloroform	UG/KG	6 U
1,2-Dichloroethane	UG/KG	6 U
2-Butanone	UG/KG	6 U
1,1,1-Trichloroethane	UG/KG	6 U
Carbon tetrachloride	UG/KG	6 U
Bromodichloromethane	UG/KG	6 U
1,2-Dichloropropane	UG/KG	6 U
cis-1,3-Dichloropropene	UG/KG	6 U
Trichloroethene	UG/KG	6 U
Dibromochloromethane	UG/KG	6 U
1,1,2-Trichloroethane	UG/KG	6 U
Benzene	UG/KG	6 U
trans-1,3-Dichloropropene	UG/KG	6 U
Bromoform	UG/KG	6 U
4-Methyl-2-pentanone	UG/KG	6 U
2-Hexanone	UG/KG	6 U
Tetrachloroethene	UG/KG	6 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U
Toluene	UG/KG	6 U
Chlorobenzene	UG/KG	6 U
Ethylbenzene	UG/KG	6 U
Styrene	UG/KG	6 U
Xylenes (total)	UG/KG	6 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-HP09-03  
 Laboratory Sample ID: 9503186-04  
 Date Sampled: 03/21/95  
 Percent Solids 82

<u>PESTICIDE/PCBS</u>	<u>UNITS</u>	
alpha-BHC	UG/KG	NA
beta-BHC	UG/KG	NA
delta-BHC	UG/KG	NA
Lindane (gamma-BHC)	UG/KG	NA
Heptachlor	UG/KG	NA
Aldrin	UG/KG	NA
Heptachlor epoxide	UG/KG	NA
Endosulfan I	UG/KG	NA
Dieldrin	UG/KG	NA
4,4'-DDE	UG/KG	NA
Endrin	UG/KG	NA
Endosulfan II	UG/KG	NA
4,4'-DDD	UG/KG	NA
Endosulfan sulfate	UG/KG	NA
4,4'-DDT	UG/KG	NA
Methoxychlor	UG/KG	NA
Endrin ketone	UG/KG	NA
Endrin aldehyde	UG/KG	NA
alpha-Chlordane	UG/KG	NA
gamma-Chlordane	UG/KG	NA
Toxaphene	UG/KG	NA
Aroclor 1016	UG/KG	NA
Aroclor 1221	UG/KG	NA
Aroclor 1232	UG/KG	NA
Aroclor 1242	UG/KG	NA
Aroclor 1248	UG/KG	NA
Aroclor 1254	UG/KG	NA
Aroclor 1260	UG/KG	NA
Thiodiglycol	MG/KG	2.4 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>				
<u>SEMIVOLATILES</u>					
1,2-Dichlorobenzene	UG/KG	ND	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	ND	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	ND	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	ND	NA	NA	NA
1,4-Dithiane	UG/KG	ND	NA	NA	NA
1,4-Oxathiane	UG/KG	ND	NA	NA	NA
2-Chloronaphthalene	UG/KG	ND	NA	NA	NA
2-Chlorophenol	UG/KG	ND	NA	NA	NA
2-Methylnaphthalene	UG/KG	ND	NA	NA	NA
2-Methylphenol	UG/KG	ND	NA	NA	NA
2-Nitroaniline	UG/KG	ND	NA	NA	NA
2-Nitrophenol	UG/KG	ND	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	ND	NA	NA	NA
2,4-Dichlorophenol	UG/KG	ND	NA	NA	NA
2,4-Dimethylphenol	UG/KG	ND	NA	NA	NA
2,4-Dinitrophenol	UG/KG	ND	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	ND	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	ND	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	ND	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	ND	NA	NA	NA
3-Nitroaniline	UG/KG	ND	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	ND	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	ND	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	ND	NA	NA	NA
4-Chloroaniline	UG/KG	ND	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	ND	NA	NA	NA
4-Methylphenol	UG/KG	ND	NA	NA	NA
4-Nitroaniline	UG/KG	ND	NA	NA	NA
4-Nitrophenol	UG/KG	ND	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	ND	NA	NA	NA
Acenaphthene	UG/KG	ND	NA	NA	NA
Acenaphthylene	UG/KG	ND	NA	NA	NA
Acetophenone	UG/KG	ND	NA	NA	NA
Anthracene	UG/KG	ND	NA	NA	NA
Benzo[a]anthracene	UG/KG	ND	NA	NA	NA
Benzo[a]pyrene	UG/KG	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL	
<u>UNITS</u>						
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/KG	ND	NA	NA	NA	
Benzo[g,h,i]perylene	UG/KG	ND	NA	NA	NA	
Benzo[k]fluoranthene	UG/KG	ND	NA	NA	NA	
bis(2-Chloroethoxy) methane	UG/KG	ND	NA	NA	NA	
bis(2-Chloroethyl) ether	UG/KG	ND	NA	NA	NA	
bis(2-Ethylhexyl)phthalate	UG/KG	53 J	188.40	52.24	218.68	268.70
Butyl benzyl phthalate	UG/KG	ND	NA	NA	NA	NA
Carbazole	UG/KG	ND	NA	NA	NA	NA
Chloroacetophenone	UG/KG	ND	NA	NA	NA	NA
Chrysene	UG/KG	ND	NA	NA	NA	NA
Dibenzofuran	UG/KG	ND	NA	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	ND	NA	NA	NA	NA
Diethylphthalate	UG/KG	260 J	212.40	27.66	228.43	230.37
Dimethyl phthalate	UG/KG	ND	NA	NA	NA	NA
di-n-Butylphthalate	UG/KG	120 J	138.45	61.96	174.36	215.15
di-n-Octylphthalate	UG/KG	ND	NA	NA	NA	NA
Fluoranthene	UG/KG	ND	NA	NA	NA	NA
Fluorene	UG/KG	ND	NA	NA	NA	NA
Hexachlorobenzene	UG/KG	ND	NA	NA	NA	NA
Hexachlorobutadiene	UG/KG	ND	NA	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	ND	NA	NA	NA	NA
Hexachloroethane	UG/KG	ND	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG	45 J	828.64	392.70	1043.18	8259.49
Indeno[1,2,3-cd]pyrene	UG/KG	ND	NA	NA	NA	NA
Isophorone	UG/KG	ND	NA	NA	NA	NA
Naphthalene	UG/KG	ND	NA	NA	NA	NA
Nitrobenzene	UG/KG	ND	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	ND	NA	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	ND	NA	NA	NA	NA
Pentachlorophenol	UG/KG	ND	NA	NA	NA	NA
Phenanthrene	UG/KG	ND	NA	NA	NA	NA
Phenol	UG/KG	ND	NA	NA	NA	NA
Pyrene	UG/KG	ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:				NORMAL	LOG NORMAL
Laboratory Sample ID:				UPPER 95%	UPPER 95%
Date Sampled:	MAXIMUM	ARITHMETIC	STANDARD	CONFIDENCE	CONFIDENCE
Percent Solids	DETECTED	MEAN	DEVIATION	INTERVAL	INTERVAL
	<u>UNITS</u>				
<u>VOLATILES</u>					
Chloromethane	UG/KG	ND	NA	NA	NA
Bromomethane	UG/KG	ND	NA	NA	NA
Vinyl chloride	UG/KG	ND	NA	NA	NA
Chloroethane	UG/KG	ND	NA	NA	NA
Methylene chloride	UG/KG	58	11.93	14.96	17.71
Acetone	UG/KG	45000	4929.27	11654.99	9435.28
Carbon Disulfide	UG/KG	ND	NA	NA	NA
1,1-Dichloroethene	UG/KG	ND	NA	NA	NA
1,1-Dichloroethane	UG/KG	ND	NA	NA	NA
1,2-Dichloroethene(total)	UG/KG	2 J	5.83	1.00	6.22
Chloroform	UG/KG	ND	NA	NA	NA
1,2-Dichloroethane	UG/KG	ND	NA	NA	NA
2-Butanone	UG/KG	ND	NA	NA	NA
1,1,1-Trichloroethane	UG/KG	2 J	5.79	0.97	6.16
Carbon tetrachloride	UG/KG	ND	NA	NA	NA
Bromodichloromethane	UG/KG	ND	NA	NA	NA
1,2-Dichloropropane	UG/KG	ND	NA	NA	NA
cis-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA
Trichloroethene	UG/KG	ND	NA	NA	NA
Dibromochloromethane	UG/KG	ND	NA	NA	NA
1,1,2-Trichloroethane	UG/KG	ND	NA	NA	NA
Benzene	UG/KG	ND	NA	NA	NA
trans-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA
Bromoform	UG/KG	ND	NA	NA	NA
4-Methyl-2-pentanone	UG/KG	ND	NA	NA	NA
2-Hexanone	UG/KG	ND	NA	NA	NA
Tetrachloroethene	UG/KG	ND	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/KG	ND	NA	NA	NA
Toluene	UG/KG	ND	NA	NA	NA
Chlorobenzene	UG/KG	ND	NA	NA	NA
Ethylbenzene	UG/KG	2 J	5.64	1.30	6.14
Styrene	UG/KG	ND	NA	NA	NA
Xylenes (total)	UG/KG	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled: Percent Solids	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL	
	<u>UNITS</u>					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	ND	NA	NA	NA	
beta-BHC	UG/KG	ND	NA	NA	NA	
delta-BHC	UG/KG	ND	NA	NA	NA	
Lindane (gamma-BHC)	UG/KG	ND	NA	NA	NA	
Heptachlor	UG/KG	ND	NA	NA	NA	
Aldrin	UG/KG	ND	NA	NA	NA	
Heptachlor epoxide	UG/KG	ND	NA	NA	NA	
Endosulfan I	UG/KG	ND	NA	NA	NA	
Dieldrin	UG/KG	ND	NA	NA	NA	
4,4'-DDE	UG/KG	1.2 J	2.02	0.39	2.25	2.33
Endrin	UG/KG	1.2 J	2.01	0.40	2.24	2.32
Endosulfan II	UG/KG	ND	NA	NA	NA	NA
4,4'-DDD	UG/KG	5.7 J	2.47	1.16	3.15	3.10
Endosulfan sulfate	UG/KG	ND	NA	NA	NA	NA
4,4'-DDT	UG/KG	1.6 J	2.05	0.32	2.24	2.25
Methoxychlor	UG/KG	ND	NA	NA	NA	NA
Endrin ketone	UG/KG	ND	NA	NA	NA	NA
Endrin aldehyde	UG/KG	ND	NA	NA	NA	NA
alpha-Chlordane	UG/KG	ND	NA	NA	NA	NA
gamma-Chlordane	UG/KG	ND	NA	NA	NA	NA
Toxaphene	UG/KG	ND	NA	NA	NA	NA
Aroclor 1016	UG/KG	ND	NA	NA	NA	NA
Aroclor 1221	UG/KG	ND	NA	NA	NA	NA
Aroclor 1232	UG/KG	ND	NA	NA	NA	NA
Aroclor 1242	UG/KG	ND	NA	NA	NA	NA
Aroclor 1248	UG/KG	ND	NA	NA	NA	NA
Aroclor 1254	UG/KG	ND	NA	NA	NA	NA
Aroclor 1260	UG/KG	ND	NA	NA	NA	NA
Thiodiglycol	MG/KG	ND	NA	NA	NA	NA

**APPENDIX P.4**  
**SITE 69 SUBSURFACE SOIL INORGANICS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-GW09-02	69-GW09-05	69-GW10-01	69-GW10-03	69-GW11-02	69-GW11-04
Laboratory Sample ID:	9401043-08A	9401043-09A	9401052-01A	9401052-02A	9401041-01A	9401041-02A
Date Sampled:			01/09/94	01/09/94	01/07/94	01/07/94
Percent Solids	84.5	76.4	94.2	83.2	73.3	85.3

	UNITS					
Aluminum	MG/KG	2460	9990	2380.0	6080.0	1980.0
Antimony	MG/KG	0.95 U	1.05 U	0.84 U	0.95 U	1.10 U
Arsenic	MG/KG	0.345 U	2.9	0.308 U	1.15	0.395 U
Barium	MG/KG	8.7	14.6	3.80	7.06	6.50
Beryllium	MG/KG	0.155 U	0.36	0.137 U	0.155 U	0.175 U
Cadmium	MG/KG	0.285 U	0.74	0.250 U	0.283 U	0.325 U
Calcium	MG/KG	14.8 U	688	29.2	59.7	73.3
Chromium	MG/KG	3.6 J	17.7	0.78 U	7.00	3.30
Cobalt	MG/KG	2.3 U	2.55 U	2.06 U	2.33 U	2.65 U
Copper	MG/KG	1.9 U	5.1	1.72 U	1.95 U	2.20 U
Iron	MG/KG	754	19900	1450.0	3880.0	1030.0
Lead	MG/KG	3	6	1.78	4.28	3.20 J
Magnesium	MG/KG	88.6	574	63.0	150.0	94.6
Manganese	MG/KG	3.3	39	20.7	3.33	5.60
Mercury	MG/KG	0.04	0.02 U	0.026 U	0.070	0.035 U
Nickel	MG/KG	3.9	3.9	1.45 U	1.64 U	1.85 U
Potassium	MG/KG	35.5 UJ	516 J	53.0 UJ	36.1 UJ	149.0
Selenium	MG/KG	0.295 UJ	0.325 U	0.269 UJ	0.304 UJ	0.340 UJ
Silver	MG/KG	0.43 J	0.05 UJ	0.043 UJ	0.048 UJ	0.055 UJ
Sodium	MG/KG	22 U	130	20.2 U	22.9 U	25.9 UJ
Thallium	MG/KG	0.55 U	0.6 U	0.489 U	0.55 U	0.65 U
Vanadium	MG/KG	1.95 U	22.6	1.76 U	11.8	2.25 U
Zinc	MG/KG	3.4	13.7	2.35 U	2.41 U	1.55 U
Total Cyanide	MG/KG	2.4	2.6	0.53 UJ	0.60 UJ	0.70 UJ



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:	69-GW12-01	69-GW02DW-01	69-GW02DW-03	69-GW12DW-01	
Laboratory Sample ID:	9401025-05A	9401052-03A	9401052-04A	9401054-01A	
Date Sampled:		01/09/94	01/09/94	01/08/94	
Percent Solids	81.2	89.6	86.2	76.3	
	<u>UNITS</u>				
Aluminum	MG/KG	1020	1610.0	2610.0	832.0
Antimony	MG/KG	0.95 U	0.88 U	0.92 U	1.04 U
Arsenic	MG/KG	0.355 UJ	0.324 UJ	0.337 UJ	0.380 U
Barium	MG/KG	1.7 U	6.80	1.59 U	1.80 U
Beryllium	MG/KG	0.16 U	0.144 U	0.150 U	0.169 U
Cadmium	MG/KG	0.295 U	0.262 U	0.273 U	0.308 U
Calcium	MG/KG	15.4 U	170.0	37.5	33.6
Chromium	MG/KG	2.8	1.76	4.50	0.97 U
Cobalt	MG/KG	2.4 U	2.17 U	2.25 U	2.54 U
Copper	MG/KG	2 U	1.81 U	1.88 U	2.13 U
Iron	MG/KG	621	1100.0	3370.0	354.0
Lead	MG/KG	3.2	4.63	2.40	3.50
Magnesium	MG/KG	26.9	52.8	100.0	29.7
Manganese	MG/KG	1.6	2.52	1.67	1.93
Mercury	MG/KG	0.03 UJ	0.043 U	0.026 U	0.039 U
Nickel	MG/KG	3.4	1.52 U	1.58 U	1.78 U
Potassium	MG/KG	36.95 U	33.5 UJ	34.8 UJ	65.5 UJ
Selenium	MG/KG	0.31 U	0.283 UJ	0.294 UJ	0.332 UJ
Silver	MG/KG	0.05 UJ	0.045 UJ	0.047 UJ	0.053 UJ
Sodium	MG/KG	23.4 U	21.2 U	22.1 U	24.9 U
Thallium	MG/KG	0.55 U	0.52 U	0.54 U	0.60 U
Vanadium	MG/KG	2.05 U	1.85 U	11.8	2.18 U
Zinc	MG/KG	3.5	2.11 U	1.87 U	3.54 U
Total Cyanide	MG/KG	1.2	0.56 UJ	0.58 UJ	0.66 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 CHEMICAL STORAGE AREA SUBSURFACE SOIL  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL INORGANICS

Client Sample ID:					NORMAL	LOG-NORMAL
Laboratory Sample ID:					UPPER 95%	UPPER 95%
Date Sampled:		MAXIMUM	ARITHMETIC	STANDARD	CONFIDENCE	CONFIDENCE
Percent Solids		DETECTED	MEAN	DEVIATION	INTERVAL	INTERVAL
	<u>UNITS</u>					
Aluminum	MG/KG	9990	3309.2	2810.5	4938.3	6709.1
Antimony	MG/KG	ND	NA	NA	NA	NA
Arsenic	MG/KG	2.9	0.68	0.82	1.16	1.23
Barium	MG/KG	14.6	5.8	4.0	8.1	12.3
Beryllium	MG/KG	0.36	0.18	0.07	0.21	0.21
Cadmium	MG/KG	0.74	0.33	0.15	0.41	0.41
Calcium	MG/KG	688	119.4	204.9	238.2	441.4
Chromium	MG/KG	17.7	4.9	5.0	7.8	13.8
Cobalt	MG/KG	ND	NA	NA	NA	NA
Copper	MG/KG	5.1	2.3	1.0	2.8	2.8
Iron	MG/KG	19900	3336.4	5938.4	6778.5	12078.6
Lead	MG/KG	6	3.6	1.2	4.3	4.7
Magnesium	MG/KG	574	131.9	160.8	225.0	303.0
Manganese	MG/KG	39	8.4	12.2	15.4	28.5
Mercury	MG/KG	0.07	0.036	0.014	0.044	0.046
Nickel	MG/KG	3.9	2.3	1.0	2.9	3.1
Potassium	MG/KG	516 J	114.5	150.9	202.0	286.0
Selenium	MG/KG	ND	NA	NA	NA	NA
Silver	MG/KG	0.43 J	0.09	0.12	0.16	0.14
Sodium	MG/KG	130	33.5	34.0	53.2	49.0
Thallium	MG/KG	ND	NA	NA	NA	NA
Vanadium	MG/KG	22.6	6.3	7.0	10.3	16.8
Zinc	MG/KG	13.7	3.6	3.6	5.7	5.9
Total Cyanide	MG/KG	2.6	1.0	0.8	1.5	1.7

**APPENDIX P.5**  
**SITE 69 SHALLOW GROUNDWATER ORGANICS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94
	UNITS					
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
1,2,4-Trichlorobenzene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
1,3-Dichlorobenzene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
1,4-Dichlorobenzene	UG/L	7.0 U	NA	8.5 U	2.00 J	5.5 U
2-Chloronaphthalene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2-Chlorophenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2-Methylnaphthalene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2-Methylphenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2-Nitroaniline	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
2-Nitrophenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,2'-oxybis-(1-chloropropane)	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,4-Dichlorophenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,4-Dimethylphenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,4-Dinitrophenol	UG/L	17.5 U	NA	21.3 UJ	15.0 U	13.8 UJ
2,4-Dinitrotoluene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,4,5-Trichlorophenol	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
2,4,6-Trichlorophenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
2,6-Dinitrotoluene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
3-Nitroaniline	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
3,3'-Dichlorobenzidine	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Bromophenyl-phenylether	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Chloro-3-methylphenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Chloroaniline	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Chlorophenyl phenyl ether	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Methylphenol	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
4-Nitroaniline	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
4-Nitrophenol	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
4,6-Dinitro-2-methylphenol	UG/L	17.5 U	NA	21.3 U	15.0 U	13.8 U
Acenaphthene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Acenaphthylene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Anthracene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Benzo[a]anthracene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Benzo[a]pyrene	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Benzo[g,h,i]perylene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Benzo[k]fluoranthene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
bis(2-Chloroethoxy) methane	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
bis(2-Chloroethyl) ether	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
bis(2-Ethylhexyl)phthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Butyl benzyl phthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Carbazole	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Chrysene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Dibenzofuran	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Dibenz[a,h]anthracene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Diethylphthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Dimethyl phthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
di-n-Butylphthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.50 U
di-n-Octylphthalate	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Fluoranthene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Fluorene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Hexachlorobenzene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Hexachlorobutadiene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Hexachlorocyclopentadiene	UG/L	7.0 U	NA	8.5 UJ	6.0 U	NA	5.5 UJ
Hexachloroethane	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Indeno[1,2,3-cd]pyrene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Isophorone	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Naphthalene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Nitrobenzene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
N-Nitroso-di-n-propylamine	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
N-nitrosodiphenylamine	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Pentachlorophenol	UG/L	17.5 U	NA	21.3 U	15.0 U	NA	13.8 U
Phenanthrene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Phenol	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U
Pyrene	UG/L	7.0 U	NA	8.5 U	6.0 U	NA	5.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94

	UNITS						
<b>VOLATILES</b>							
Chloromethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Bromomethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Vinyl chloride	UG/L	5.0 U	NA	31.0 J	5.0 U	NA	5.0 U
Chloroethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Methylene chloride	UG/L	5.00 U	NA	5.00 U	5.00 U	NA	5.00 U
Acetone	UG/L	5.0 UJ	NA	5.00 UJ	5.00 UJ	NA	5.0 UJ
Carbon Disulfide	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	NA	5.0 U	1.00 J	NA	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,2-Dichloroethene(total)	UG/L	5.0 U	NA	2400.0	630.0	NA	32.0 J
Chloroform	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
2-Butanone	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Carbon tetrachloride	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Bromodichloromethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
cis-1,3-Dichloropropene	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Trichloroethene	UG/L	5.0 U	NA	23.0 J	1.00 J	NA	5.0 U
Dibromochloromethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Benzene	UG/L	5.0 U	NA	5.0 U	1.00 J	NA	5.0 U
trans-1,3-Dichloropropene	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Bromoform	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
2-Hexanone	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Tetrachloroethene	UG/L	5.0 U	NA	1.00 J	5.0 U	NA	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U	NA	22.0 J	5.0 U	NA	2.00 J
Toluene	UG/L	5.0 U	NA	1.00 J	4.00 J	NA	5.0 U
Chlorobenzene	UG/L	5.0 U	NA	5.0 U	25.0 J	NA	5.0 U
Ethylbenzene	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Styrene	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Xylenes (total)	UG/L	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94
	UNITS					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
beta-BHC	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
delta-BHC	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Lindane (gamma-BHC)	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Heptachlor	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Aldrin	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Heptachlor epoxide	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Endosulfan I	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Dieldrin	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
4,4'-DDE	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
Endrin	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
Endosulfan II	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
4,4'-DDD	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
Endosulfan sulfate	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
4,4'-DDT	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
Methoxychlor	UG/L	NA	0.25 U	0.250 UJ	NA	0.250 UJ
Endrin ketone	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
Endrin aldehyde	UG/L	NA	0.05 U	0.050 UJ	NA	0.050 UJ
alpha-Chlordane	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
gamma-Chlordane	UG/L	NA	0.025 U	0.025 UJ	NA	0.025 UJ
Toxaphene	UG/L	NA	2.5 U	2.50 UJ	NA	2.50 UJ
Aroclor 1016	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ
Aroclor 1221	UG/L	NA	1 U	1.00 UJ	NA	1.00 UJ
Aroclor 1232	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ
Aroclor 1242	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ
Aroclor 1248	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ
Aroclor 1254	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ
Aroclor 1260	UG/L	NA	0.5 U	0.50 UJ	NA	0.50 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Client Sample ID:	69-GW01-01	69-GW01-02	69-GW02-01	69-GW03-01	69-GW03-02	69-GW04-01
Laboratory Sample ID:	9401130-07A	AB8050	9401128-01A	9401130-06A	AB7976	9401128-03A
Date Sampled:	01/22/94	08/26/94	01/22/94	01/22/94	08/25/94	01/22/94
	<u>UNITS</u>					
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Chloroacetophenone	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
Hydroxyacetophenone	UG/L	35.0 U	NA	42.5 U	30.0 U	27.5 U
Bis(2'-chloroethyl)disulfide	UG/L	35.0 U	NA	42.5 U	30.0 U	27.5 U
Bis(2'-chloroethyl)trisulfide	UG/L	35.0 U	NA	42.5 U	30.0 U	27.5 U
1,4-Dithiane	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
1,4-Oxathiane	UG/L	7.0 U	NA	8.5 U	6.0 U	5.5 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	UG/L	12.5 U	NA	12.5 UJ	12.5 U	12.5 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	UNITS					
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
1,2,4-Trichlorobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
1,3-Dichlorobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
1,4-Dichlorobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2-Chloronaphthalene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2-Chlorophenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2-Methylnaphthalene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2-Methylphenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2-Nitroaniline	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
2-Nitrophenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,4-Dichlorophenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,4-Dimethylphenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,4-Dinitrophenol	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
2,4-Dinitrotoluene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,4,5-Trichlorophenol	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
2,4,6-Trichlorophenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
2,6-Dinitrotoluene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
3-Nitroaniline	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
3,3'-Dichlorobenzidine	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Bromophenyl-phenylether	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Chloro-3-methylphenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Chloroaniline	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Chlorophenyl phenyl ether	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Methylphenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
4-Nitroaniline	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
4-Nitrophenol	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
4,6-Dinitro-2-methylphenol	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	17.4 U
Acenaphthene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
Acenaphthylene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
Anthracene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
Benzo[a]anthracene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U
Benzo[a]pyrene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	7.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Benzo[g,h,i]perylene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Benzo[k]fluoranthene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
bis(2-Chloroethoxy) methane	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
bis(2-Chloroethyl) ether	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
bis(2-Ethylhexyl)phthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Butyl benzyl phthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Carbazole	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Chrysene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Dibenzofuran	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Dibenz[a,h]anthracene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Diethylphthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Dimethyl phthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
di-n-Butylphthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	6.00 U	7.0 U
di-n-Octylphthalate	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Fluoranthene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Fluorene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Hexachlorobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Hexachlorobutadiene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Hexachlorocyclopentadiene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Hexachloroethane	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Indeno[1,2,3-cd]pyrene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Isophorone	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Naphthalene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Nitrobenzene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
N-Nitroso-di-n-propylamine	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
N-nitrosodiphenylamine	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Pentachlorophenol	UG/L	17.6 U	15.1 U	15.0 U	18.6 U	14.0 U	17.4 U
Phenanthrene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Phenol	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Pyrene	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	<u>UNITS</u>					
<u>VOLATILES</u>						
Chloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Acetone	UG/L	17.0 U	5.00 U	5.00 U	6.0 U	7.0 UJ
Carbon Disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene(total)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94
	UNITS					
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/L	0.035 UJ	0.028 UJ	0.025 UJ	0.030 UJ	0.035 UJ
beta-BHC	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
delta-BHC	UG/L	0.035 UJ	0.028 UJ	0.025 UJ	0.030 UJ	0.035 UJ
Lindane (gamma-BHC)	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
Heptachlor	UG/L	0.035 UJ	0.028 U	0.030 U	0.030 UJ	0.035 UJ
Aldrin	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
Heptachlor epoxide	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
Endosulfan I	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
Dieldrin	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
4,4'-DDE	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Endrin	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Endosulfan II	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
4,4'-DDD	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Endosulfan sulfate	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
4,4'-DDT	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Methoxychlor	UG/L	0.350 UJ	0.275 U	0.250 U	0.300 UJ	0.350 UJ
Endrin ketone	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
Endrin aldehyde	UG/L	0.070 UJ	0.055 U	0.050 U	0.060 UJ	0.070 UJ
alpha-Chlordane	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
gamma-Chlordane	UG/L	0.035 UJ	0.028 U	0.025 U	0.030 UJ	0.035 UJ
Toxaphene	UG/L	3.50 UJ	2.75 U	2.50 U	3.00 UJ	3.50 UJ
Aroclor 1016	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ
Aroclor 1221	UG/L	1.40 UJ	1.10 U	1.00 U	1.20 UJ	1.40 UJ
Aroclor 1232	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ
Aroclor 1242	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ
Aroclor 1248	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ
Aroclor 1254	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ
Aroclor 1260	UG/L	0.70 UJ	0.55 U	0.50 U	0.60 UJ	0.70 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW05-01	69-GW06-01	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	
Laboratory Sample ID:	9401118-03A	9401118-02A	9401130-05A	9401118-01A	9401117-03A	9401117-04A	
Date Sampled:	01/21/94	01/21/94	01/22/94	01/21/94	01/20/94	01/20/94	
	<u>UNITS</u>						
<u>CHEMICAL SURETY</u>							
Acetophenone	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Chloroacetophenone	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
Hydroxyacetophenone	UG/L	35.3 U	30.1 U	30.0 U	37.3 U	27.9 U	34.8 U
Bis(2'-chloroethyl)disulfide	UG/L	35.3 U	30.1 U	30.0 U	37.3 U	27.9 U	32.5 U
Bis(2'-chloroethyl)trisulfide	UG/L	35.3 U	30.1 U	30.0 U	37.3 U	27.9 U	32.5 U
1,4-Dithiane	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
1,4-Oxathiane	UG/L	7.1 U	6.0 U	6.0 U	7.5 U	5.6 U	7.0 U
<u>THIODIGLYCOL</u>							
Thiodiglycol	UG/L	12.5 U	12.5 U	12.5 U	12.5 U	12.5 U	12.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

SEMIVOLATILES

1,2-Dichlorobenzene	UG/L	6.4 U	25.0 U
1,2,4-Trichlorobenzene	UG/L	6.4 U	25.0 U
1,3-Dichlorobenzene	UG/L	6.4 U	25.0 U
1,4-Dichlorobenzene	UG/L	6.4 U	25.0 U
2-Chloronaphthalene	UG/L	6.4 U	25.0 U
2-Chlorophenol	UG/L	6.4 U	25.0 U
2-Methylnaphthalene	UG/L	6.4 U	25.0 U
2-Methylphenol	UG/L	6.4 U	25.0 U
2-Nitroaniline	UG/L	16.0 U	62.5 U
2-Nitrophenol	UG/L	6.4 U	25.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	6.4 U	25.0 U
2,4-Dichlorophenol	UG/L	6.4 U	25.0 U
2,4-Dimethylphenol	UG/L	6.4 U	25.0 U
2,4-Dinitrophenol	UG/L	16.0 U	62.5 U
2,4-Dinitrotoluene	UG/L	6.4 U	25.0 U
2,4,5-Trichlorophenol	UG/L	16.0 U	62.5 U
2,4,6-Trichlorophenol	UG/L	6.4 U	25.0 U
2,6-Dinitrotoluene	UG/L	6.4 U	25.0 U
3-Nitroaniline	UG/L	16.0 U	62.5 U
3,3'-Dichlorobenzidine	UG/L	6.4 U	25.0 U
4-Bromophenyl-phenylether	UG/L	6.4 U	25.0 U
4-Chloro-3-methylphenol	UG/L	6.4 U	25.0 U
4-Chloroaniline	UG/L	6.4 U	25.0 U
4-Chlorophenyl phenyl ether	UG/L	6.4 U	25.0 U
4-Methylphenol	UG/L	6.4 U	25.0 U
4-Nitroaniline	UG/L	16.0 U	62.5 U
4-Nitrophenol	UG/L	16.0 U	62.5 U
4,6-Dinitro-2-methylphenol	UG/L	16.0 U	62.5 U
Acenaphthene	UG/L	6.4 U	25.0 U
Acenaphthylene	UG/L	6.4 U	25.0 U
Anthracene	UG/L	6.4 U	25.0 U
Benzo[a]anthracene	UG/L	6.4 U	25.0 U
Benzo[a]pyrene	UG/L	6.4 U	25.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	6.4 U	25.0 U
Benzo[g,h,i]perylene	UG/L	6.4 U	25.0 U
Benzo[k]fluoranthene	UG/L	6.4 U	25.0 U
bis(2-Chloroethoxy) methane	UG/L	6.4 U	25.0 U
bis(2-Chloroethyl) ether	UG/L	6.4 U	25.0 U
bis(2-Ethylhexyl)phthalate	UG/L	6.4 U	25.0 U
Butyl benzyl phthalate	UG/L	6.4 U	25.0 U
Carbazole	UG/L	6.4 U	25.0 U
Chrysene	UG/L	6.4 U	25.0 U
Dibenzofuran	UG/L	6.4 U	25.0 U
Dibenz[a,h]anthracene	UG/L	6.4 U	25.0 U
Diethylphthalate	UG/L	6.4 U	25.0 U
Dimethyl phthalate	UG/L	6.4 U	25.0 U
di-n-Butylphthalate	UG/L	6.50 U	25.0 U
di-n-Octylphthalate	UG/L	6.4 U	25.0 U
Fluoranthene	UG/L	6.4 U	25.0 U
Fluorene	UG/L	6.4 U	25.0 U
Hexachlorobenzene	UG/L	6.4 U	25.0 U
Hexachlorobutadiene	UG/L	6.4 U	25.0 U
Hexachlorocyclopentadiene	UG/L	6.4 U	25.0 U
Hexachloroethane	UG/L	6.4 U	25.0 U
Indeno[1,2,3-cd]pyrene	UG/L	6.4 U	25.0 U
Isophorone	UG/L	6.4 U	25.0 U
Naphthalene	UG/L	6.4 U	25.0 U
Nitrobenzene	UG/L	6.4 U	25.0 U
N-Nitroso-di-n-propylamine	UG/L	6.4 U	25.0 U
N-nitrosodiphenylamine	UG/L	6.4 U	25.0 U
Pentachlorophenol	UG/L	16.0 U	62.5 U
Phenanthrene	UG/L	6.4 U	25.0 U
Phenol	UG/L	6.4 U	25.0 U
Pyrene	UG/L	6.4 U	25.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

UNITS

VOLATILES

Chloromethane	UG/L	5.0 U	5.0 U
Bromomethane	UG/L	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U
Methylene chloride	UG/L	5.00 U	5.00 U
Acetone	UG/L	6.5 UJ	470 R
Carbon Disulfide	UG/L	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U
1,2-Dichloroethene(total)	UG/L	5.0 U	2.00 J
Chloroform	UG/L	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U
2-Butanone	UG/L	5.0 U	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U
cis-1,3-Dichloropropene	UG/L	5.0 U	5.0 U
Trichloroethene	UG/L	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U
Benzene	UG/L	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	5.0 U	5.0 U
Bromoform	UG/L	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U	1.00 J
Toluene	UG/L	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U
Xylenes (total)	UG/L	5.0 U	5.0 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94

	<u>UNITS</u>		
<u>PESTICIDE/PCBS</u>			
alpha-BHC	UG/L	0.030 UJ	0.125 UJ
beta-BHC	UG/L	0.030 UJ	0.125 UJ
delta-BHC	UG/L	0.030 UJ	0.125 UJ
Lindane (gamma-BHC)	UG/L	0.030 UJ	0.125 UJ
Heptachlor	UG/L	0.030 UJ	0.125 UJ
Aldrin	UG/L	0.030 UJ	0.125 UJ
Heptachlor epoxide	UG/L	0.030 UJ	0.125 UJ
Endosulfan I	UG/L	0.030 UJ	0.125 UJ
Dieldrin	UG/L	0.060 UJ	0.250 UJ
4,4'-DDE	UG/L	0.060 UJ	0.250 UJ
Endrin	UG/L	0.060 UJ	0.250 UJ
Endosulfan II	UG/L	0.060 UJ	0.250 UJ
4,4'-DDD	UG/L	0.060 UJ	0.250 UJ
Endosulfan sulfate	UG/L	0.060 UJ	0.250 UJ
4,4'-DDT	UG/L	0.060 UJ	0.250 UJ
Methoxychlor	UG/L	0.300 UJ	1.25 UJ
Endrin ketone	UG/L	0.060 UJ	0.250 UJ
Endrin aldehyde	UG/L	0.060 UJ	0.250 UJ
alpha-Chlordane	UG/L	0.030 UJ	0.125 UJ
gamma-Chlordane	UG/L	0.030 UJ	0.125 UJ
Toxaphene	UG/L	3.00 UJ	12.5 UJ
Aroclor 1016	UG/L	0.60 UJ	2.50 UJ
Aroclor 1221	UG/L	1.20 UJ	5.0 UJ
Aroclor 1232	UG/L	0.60 UJ	2.50 UJ
Aroclor 1242	UG/L	0.60 UJ	2.50 UJ
Aroclor 1248	UG/L	0.60 UJ	2.50 UJ
Aroclor 1254	UG/L	0.60 UJ	2.50 UJ
Aroclor 1260	UG/L	0.60 UJ	2.50 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

	69-GW11-01	69-GW12-01
Client Sample ID:	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401117-02A	9401117-01A
Date Sampled:	01/20/94	01/20/94
	<u>UNITS</u>	
<u>CHEMICAL SURETY</u>		
Acetophenone	UG/L 6.4 U	25.0 U
Chloroacetophenone	UG/L 6.4 U	25.0 U
Hydroxyacetophenone	UG/L 32.0 U	125.0 U
Bis(2'-chloroethyl)disulfide	UG/L 32.0 U	125.0 U
Bis(2'-chloroethyl)trisulfide	UG/L 32.0 U	125.0 U
1,4-Dithiane	UG/L 6.4 U	25.0 U
1,4-Oxathiane	UG/L 6.4 U	25.0 U
<u>THIODIGLYCOL</u>		
Thiodiglycol	UG/L 12.5 U	12.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>SEMIVOLATILES</u>					
1,2-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,2,4-Trichlorobenzene	UG/L	ND	NA	NA	NA
1,3-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,4-Dichlorobenzene	UG/L	2 J	7.8	5.6	10.7
2-Chloronaphthalene	UG/L	ND	NA	NA	NA
2-Chlorophenol	UG/L	ND	NA	NA	NA
2-Methylnaphthalene	UG/L	ND	NA	NA	NA
2-Methylphenol	UG/L	ND	NA	NA	NA
2-Nitroaniline	UG/L	ND	NA	NA	NA
2-Nitrophenol	UG/L	ND	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/L	ND	NA	NA	NA
2,4-Dichlorophenol	UG/L	ND	NA	NA	NA
2,4-Dimethylphenol	UG/L	ND	NA	NA	NA
2,4-Dinitrophenol	UG/L	ND	NA	NA	NA
2,4-Dinitrotoluene	UG/L	ND	NA	NA	NA
2,4,5-Trichlorophenol	UG/L	ND	NA	NA	NA
2,4,6-Trichlorophenol	UG/L	ND	NA	NA	NA
2,6-Dinitrotoluene	UG/L	ND	NA	NA	NA
3-Nitroaniline	UG/L	ND	NA	NA	NA
3,3'-Dichlorobenzidine	UG/L	ND	NA	NA	NA
4-Bromophenyl-phenylether	UG/L	ND	NA	NA	NA
4-Chloro-3-methylphenol	UG/L	ND	NA	NA	NA
4-Chloroaniline	UG/L	ND	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/L	ND	NA	NA	NA
4-Methylphenol	UG/L	ND	NA	NA	NA
4-Nitroaniline	UG/L	ND	NA	NA	NA
4-Nitrophenol	UG/L	ND	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/L	ND	NA	NA	NA
Acenaphthene	UG/L	ND	NA	NA	NA
Acenaphthylene	UG/L	ND	NA	NA	NA
Anthracene	UG/L	ND	NA	NA	NA
Benzo[a]anthracene	UG/L	ND	NA	NA	NA
Benzo[a]pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>SEMIVOLATILES Cont.</u>					
Benzo[b]fluoranthene	UG/L	ND	NA	NA	NA
Benzo[g,h,i]perylene	UG/L	ND	NA	NA	NA
Benzo[k]fluoranthene	UG/L	ND	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/L	ND	NA	NA	NA
bis(2-Chloroethyl) ether	UG/L	ND	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/L	ND	NA	NA	NA
Butyl benzyl phthalate	UG/L	ND	NA	NA	NA
Carbazole	UG/L	ND	NA	NA	NA
Chrysene	UG/L	ND	NA	NA	NA
Dibenzofuran	UG/L	ND	NA	NA	NA
Dibenz[a,h]anthracene	UG/L	ND	NA	NA	NA
Diethylphthalate	UG/L	ND	NA	NA	NA
Dimethyl phthalate	UG/L	ND	NA	NA	NA
di-n-Butylphthalate	UG/L	ND	NA	NA	NA
di-n-Octylphthalate	UG/L	ND	NA	NA	NA
Fluoranthene	UG/L	ND	NA	NA	NA
Fluorene	UG/L	ND	NA	NA	NA
Hexachlorobenzene	UG/L	ND	NA	NA	NA
Hexachlorobutadiene	UG/L	ND	NA	NA	NA
Hexachlorocyclopentadiene	UG/L	ND	NA	NA	NA
Hexachloroethane	UG/L	ND	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/L	ND	NA	NA	NA
Isophorone	UG/L	ND	NA	NA	NA
Naphthalene	UG/L	ND	NA	NA	NA
Nitrobenzene	UG/L	ND	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/L	ND	NA	NA	NA
N-nitrosodiphenylamine	UG/L	ND	NA	NA	NA
Pentachlorophenol	UG/L	ND	NA	NA	NA
Phenanthrene	UG/L	ND	NA	NA	NA
Phenol	UG/L	ND	NA	NA	NA
Pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>VOLATILES</u>					
Chloromethane	UG/L	ND	NA	NA	NA
Bromomethane	UG/L	ND	NA	NA	NA
Vinyl chloride	UG/L	31 J	7.2	7.5	11.1
Chloroethane	UG/L	ND	NA	NA	NA
Methylene chloride	UG/L	ND	NA	NA	NA
Acetone	UG/L	ND	NA	NA	NA
Carbon Disulfide	UG/L	1 J	4.7	1.2	5.3
1,1-Dichloroethene	UG/L	1 J	4.7	1.2	5.3
1,1-Dichloroethane	UG/L	ND	NA	NA	NA
1,2-Dichloroethene(total)	UG/L	2400	258.7	697.7	620.4
Chloroform	UG/L	ND	NA	NA	NA
1,2-Dichloroethane	UG/L	ND	NA	NA	NA
2-Butanone	UG/L	ND	NA	NA	NA
1,1,1-Trichloroethane	UG/L	ND	NA	NA	NA
Carbon tetrachloride	UG/L	ND	NA	NA	NA
Bromodichloromethane	UG/L	ND	NA	NA	NA
1,2-Dichloropropane	UG/L	ND	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
Trichloroethene	UG/L	23 J	6.2	5.4	9.0
Dibromochloromethane	UG/L	ND	NA	NA	NA
1,1,2-Trichloroethane	UG/L	ND	NA	NA	NA
Benzene	UG/L	1 J	4.7	1.2	5.3
trans-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
Bromoform	UG/L	ND	NA	NA	NA
4-Methyl-2-pentanone	UG/L	ND	NA	NA	NA
2-Hexanone	UG/L	ND	NA	NA	NA
Tetrachloroethene	UG/L	1 J	4.7	1.2	5.3
1,1,2,2-Tetrachloroethane	UG/L	22 J	5.8	5.3	8.6
Toluene	UG/L	4 J	4.6	1.2	5.2
Chlorobenzene	UG/L	25 J	6.7	5.8	9.7
Ethylbenzene	UG/L	ND	NA	NA	NA
Styrene	UG/L	ND	NA	NA	NA
Xylenes (total)	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>PESTICIDE/PCBS</u>					
	alpha-BHC	UG/L 0.056	0.04	0.03	0.05	0.05
	beta-BHC	UG/L ND	NA	NA	NA	NA
	delta-BHC	UG/L 2.3	0.2	0.7	0.6	0.5
	Lindane (gamma-BHC)	UG/L ND	NA	NA	NA	NA
	Heptachlor	UG/L ND	NA	NA	NA	NA
	Aldrin	UG/L ND	NA	NA	NA	NA
	Heptachlor epoxide	UG/L ND	NA	NA	NA	NA
	Endosulfan I	UG/L ND	NA	NA	NA	NA
	Dieldrin	UG/L ND	NA	NA	NA	NA
	4,4'-DDE	UG/L ND	NA	NA	NA	NA
	Endrin	UG/L ND	NA	NA	NA	NA
	Endosulfan II	UG/L ND	NA	NA	NA	NA
	4,4'-DDD	UG/L ND	NA	NA	NA	NA
	Endosulfan sulfate	UG/L ND	NA	NA	NA	NA
	4,4'-DDT	UG/L ND	NA	NA	NA	NA
	Methoxychlor	UG/L ND	NA	NA	NA	NA
	Endrin ketone	UG/L ND	NA	NA	NA	NA
	Endrin aldehyde	UG/L ND	NA	NA	NA	NA
	alpha-Chlordane	UG/L ND	NA	NA	NA	NA
	gamma-Chlordane	UG/L ND	NA	NA	NA	NA
	Toxaphene	UG/L ND	NA	NA	NA	NA
	Aroclor 1016	UG/L ND	NA	NA	NA	NA
	Aroclor 1221	UG/L ND	NA	NA	NA	NA
	Aroclor 1232	UG/L ND	NA	NA	NA	NA
	Aroclor 1242	UG/L ND	NA	NA	NA	NA
	Aroclor 1248	UG/L ND	NA	NA	NA	NA
	Aroclor 1254	UG/L ND	NA	NA	NA	NA
	Aroclor 1260	UG/L ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>CHEMICAL SURETY</u>					
Acetophenone	UG/L	ND	NA	NA	NA
Chloroacetophenone	UG/L	ND	NA	NA	NA
Hydroxyacetophenone	UG/L	ND	NA	NA	NA
Bis(2'-chloroethyl)disulfide	UG/L	ND	NA	NA	NA
Bis(2'-chloroethyl)trisulfide	UG/L	ND	NA	NA	NA
1,4-Dithiane	UG/L	ND	NA	NA	NA
1,4-Oxathiane	UG/L	ND	NA	NA	NA
<u>THIODIGLYCOL</u>					
Thiodiglycol	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW1	69GW02	69GW3	69GW4	69GW5	69GW6
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA
Date Sampled:	02/26/95	02/24/95	02/25/95	02/25/95	02/25/95	02/26/95

UNITS

<u>PURGEABLE HALOCARBONS 601</u>						
Bromodichloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromoform	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromomethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Carbon Tetrachloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Chlorovinyl ether	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroform	UG/L	2.5 U	2.5 U	2.5 U	6	2.5 U
Chloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dibromochloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dichlorodifluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene	UG/L	2.5 U	230	2.5 U	2.5 U	2.5 U
1,2-Dichloropropane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methylene Chloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2,2,-Tetrachloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Tetrachloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	UG/L	2.5 U	10	8	2.5 U	2.5 U
1,1,1-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichlorofluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl Chloride	UG/L	2.5 U	5	2.5 U	2.5 U	2.5 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW7	69GW8	69GW09	69GW10	69GW11	69GW12
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA
Date Sampled:	02/26/95	02/26/95	02/21/95	02/23/95	02/22/95	02/22/95

UNITS

PURGEABLE HALOCARBONS 601

Bromodichloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromoform	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromomethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Carbon Tetrachloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Chlorovinyl ether	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroform	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dibromochloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dichlorodifluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloropropane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methylene Chloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2,2-Tetrachloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Tetrachloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,1-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichlorofluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl Chloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

STATISTICAL SUMMARY  
 PERABLE UNIT NO. 14 (SITE 69)  
 WO GROUNDWATER - SHALLOW WELLS  
 CAMP LEJEUNE, NORTH CAROLINA  
 EDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW13	69GW14
Laboratory Sample ID:	NA	NA
Date Sampled:	02/21/95	02/24/95

UNITS

PURGEABLE HALOCARBONS 601

Bromodichloromethane	UG/L	2.5 U	2.5 U
Bromoform	UG/L	2.5 U	2.5 U
Bromomethane	UG/L	2.5 U	2.5 U
Carbon Tetrachloride	UG/L	2.5 U	2.5 U
Chlorobenzene	UG/L	2.5 U	2.5 U
Chloroethane	UG/L	2.5 U	2.5 U
2-Chlorovinyl ether	UG/L	2.5 U	2.5 U
Chloroform	UG/L	2.5 U	2.5 U
Chloromethane	UG/L	2.5 U	2.5 U
Dibromochloromethane	UG/L	2.5 U	2.5 U
1,2-Dichlorobenzene	UG/L	2.5 U	2.5 U
1,3-Dichlorobenzene	UG/L	2.5 U	2.5 U
1,4-Dichlorobenzene	UG/L	2.5 U	2.5 U
Dichlorodifluoromethane	UG/L	2.5 U	2.5 U
1,1-Dichloroethane	UG/L	2.5 U	2.5 U
1,2-Dichloroethane	UG/L	2.5 U	2.5 U
1,1-Dichloroethene	UG/L	2.5 U	2.5 U
trans-1,2-Dichloroethene	UG/L	2.5 U	2.5 U
1,2-Dichloropropane	UG/L	2.5 U	2.5 U
cis-1,3-Dichloropropene	UG/L	2.5 U	2.5 U
trans-1,3-Dichloropropene	UG/L	2.5 U	2.5 U
Methylene Chloride	UG/L	2.5 U	2.5 U
1,1,2,2,-Tetrachloroethane	UG/L	2.5 U	2.5 U
Tetrachloroethene	UG/L	2.5 U	2.5 U
Trichloroethene	UG/L	2.5 U	2.5 U
1,1,1-Trichloroethane	UG/L	2.5 U	2.5 U
1,1,2-Trichloroethane	UG/L	2.5 U	2.5 U
Trichlorofluoromethane	UG/L	2.5 U	2.5 U
Vinyl Chloride	UG/L	2.5 U	2.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - SHALLOW WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>PURGEABLE HALOCARBONS 601</u>					
Bromodichloromethane	UG/L	ND	NA	NA	NA
Bromoform	UG/L	ND	NA	NA	NA
Bromomethane	UG/L	ND	NA	NA	NA
Carbon Tetrachloride	UG/L	ND	NA	NA	NA
Chlorobenzene	UG/L	ND	NA	NA	NA
Chloroethane	UG/L	ND	NA	NA	NA
2-Chlorovinyl ether	UG/L	ND	NA	NA	NA
Chloroform	UG/L	6	2.75	0.94	3.19
Chloromethane	UG/L	ND	NA	NA	NA
Dibromochloromethane	UG/L	ND	NA	NA	NA
1,2-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,3-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,4-Dichlorobenzene	UG/L	ND	NA	NA	NA
Dichlorodifluoromethane	UG/L	ND	NA	NA	NA
1,1-Dichloroethane	UG/L	ND	NA	NA	NA
1,2-Dichloroethane	UG/L	ND	NA	NA	NA
1,1-Dichloroethene	UG/L	ND	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	230	18.75	60.80	47.53
1,2-Dichloropropane	UG/L	ND	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
Methylene Chloride	UG/L	ND	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/L	ND	NA	NA	NA
Tetrachloroethene	UG/L	ND	NA	NA	NA
Trichloroethene	UG/L	10	3.43	2.39	4.56
1,1,1-Trichloroethane	UG/L	ND	NA	NA	NA
1,1,2-Trichloroethane	UG/L	ND	NA	NA	NA
Trichlorofluoromethane	UG/L	ND	NA	NA	NA
Vinyl Chloride	UG/L	5	2.68	0.67	2.99

**APPENDIX P.6**  
**SITE 69 SHALLOW GROUNDWATER TOTAL METALS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:	69-GW01-02	69-GW02-01	69-GW03-02	69-GW04-01	69-GW05-01	69-GW06-01
Laboratory Sample ID:	AB8051	9401128-01A	AB7977	9401128-03A	9401118-03A	9401118-02A
Date Sampled:	08/26/94	01/22/94	08/25/94	01/22/94	01/21/94	01/21/94

	UNITS	69-GW01-02	69-GW02-01	69-GW03-02	69-GW04-01	69-GW05-01	69-GW06-01
Aluminum	UG/L	3640	17500.0 J	304	45000.0 J	8100.0	10500.0
Antimony	UG/L	25 U	3.95 UJ	25 U	3.95 UJ	7.9 R	8.59 J
Arsenic	UG/L	1 U	1.45 UJ	1 U	1.45 UJ	5.00	10.8
Barium	UG/L	60	50.1	29.6	73.9	89.6	68.7
Beryllium	UG/L	0.5 U	0.65 U	0.5 U	0.65 U	0.65 U	2.12
Cadmium	UG/L	2.5 U	1.18 U	2.5 U	1.18 U	3.12	1.18 U
Calcium	UG/L	5360	8690.0 J	5320	2430.0 J	4140.0	3380.0
Chromium	UG/L	5 U	35.0	5 U	51.5	15.1	29.0
Cobalt	UG/L	5 U	9.7 U	5 U	9.7 U	9.7 U	9.7 U
Copper	UG/L	5 U	8.1 U	5 U	8.1 U	8.1 U	8.1 U
Iron	UG/L	1610	71900.0 J	10100	99500.0 J	40600.0	34200.0
Lead	UG/L	4.4	12.3	1 U	20.2	9.35 J	40.5
Magnesium	UG/L	2570	1930.0	371	1460.0	2600.0	2930.0
Manganese	UG/L	41.3	102.0	92.6	151.0	148.0	66.3
Mercury	UG/L	0.1 U	0.050 U	0.1 U	0.173	0.068	0.128
Nickel	UG/L	10 U	6.8 U	10 U	6.8 U	6.8 U	6.8 U
Potassium	UG/L	500 U	1510.00 J	500 U	1700.00 J	1860.0	1640.0
Selenium	UG/L	1 U	1.27 UJ	1 U	1.27 UJ	1.27 U	1.27 UJ
Silver	UG/L	2.5 U	0.200 UJ	2.5 U	0.200 UJ	0.200 U	0.200 U
Sodium	UG/L	13000	14100.0	6510	9750.00	7140.0	8270.0
Thallium	UG/L	1 U	2.30 UJ	1 U	2.30 U	2.30 UJ	2.30 U
Vanadium	UG/L	5 U	175.0	5 U	79.5	32.5	34.0
Zinc	UG/L	234	71.3 J	1990	9120.0 J	23.2 U	56.3
Total Cyanide	UG/L	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401130-05A	9401118-01A	9401117-03A	9401117-04A	9401117-02A	9401117-01A
Date Sampled:	01/22/94	01/21/94	01/20/94	01/20/94	01/20/94	01/20/94

	UNITS	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Aluminum	UG/L	7380.0 J	48000.0	18400.0	21500.0	11800.0	211000.0
Antimony	UG/L	3.95 UJ	7.9 R	7.9 R	7.9 R	7.9 R	7.9 R
Arsenic	UG/L	1.45 UJ	7.06	3.20	19.9	2.94 J	14.5 UJ
Barium	UG/L	46.5	601.0	182.0	134.0	58.0	850.0
Beryllium	UG/L	0.65 U	4.30	2.42	2.10	0.65 U	10.6
Cadmium	UG/L	1.18 U	3.89	1.18 U	1.18 U	1.18 U	11.4
Calcium	UG/L	4310.0 J	38700.0	8720.0	5970.0	2010.0	23400.0
Chromium	UG/L	15.8	76.2	29.4	44.2	17.8	159.0
Cobalt	UG/L	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	25.9
Copper	UG/L	8.1 U	21.1	8.1 U	16.5	8.1 U	70.8
Iron	UG/L	19200.0 J	56400.0	48300.0	31600.0	6360.0	51700.0
Lead	UG/L	7.80	77.3	9.79 J	37.8	8.90 J	188.0
Magnesium	UG/L	2140.0	8080.0	3640.0	3060.0	2190.0	13200.0
Manganese	UG/L	13.0	912.0	204.0	265.0	43.1	476.0
Mercury	UG/L	0.050 U	0.419	0.032 U	0.215	0.032 U	0.936
Nickel	UG/L	6.8 U	24.2	16.7	26.2	6.8 U	99.8
Potassium	UG/L	1410.00 J	4000.0	2320.0	2880.0	1640.0	7610.0
Selenium	UG/L	1.27 UJ	1.27 UJ	3.81 J	1.27 UJ	5.13 J	5.28 J
Silver	UG/L	0.200 UJ	0.200 U	0.200 U	1.16 U	0.200 U	0.200 U
Sodium	UG/L	5570.00	4790.0	9210.0	4890.0	7240.0	4130.0
Thallium	UG/L	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U
Vanadium	UG/L	17.2	103.0	39.6	60.8	24.9	210.0
Zinc	UG/L	18.1 UJ	136.0	84.6	133.0	52.1	689.0
Total Cyanide	UG/L	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**SHALLOW GROUNDWATER**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**TAL TOTAL METALS**

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	Aluminum	211000	33593.7	57838.0	63580.4	386429.1
	Antimony	8.59 J	11.7	10.4	17.1	71.2
	Arsenic	19.9	5.8	6.2	9.0	18.2
	Barium	850	187.0	260.4	322.0	495.5
	Beryllium	10.6	2.1	2.9	3.7	4.9
	Cadmium	11.4	2.6	2.9	4.1	4.4
	Calcium	38700	9369.2	10842.6	14990.6	18461.8
	Chromium	159	40.3	42.7	62.4	122.9
	Cobalt	25.9	10.3	5.2	13.0	13.3
	Copper	70.8	14.6	18.3	24.1	23.7
	Iron	99500 J	39289.2	28704.1	54171.1	172872.8
	Lead	188	34.8	52.9	62.2	200.2
	Magnesium	13200	3680.9	3527.4	5509.7	7922.7
	Manganese	912	209.5	255.0	341.7	745.4
	Mercury	0.936	0.2	0.3	0.3	0.5
	Nickel	99.8	19.0	26.4	32.7	34.4
	Potassium	7610	2297.5	1924.6	3295.3	4262.6
	Selenium	5.28 J	2.1	1.6	2.9	3.2
	Silver	ND	NA	NA	NA	NA
	Sodium	14100	7883.3	3177.2	9530.6	10053.0
	Thallium	ND	NA	NA	NA	NA
	Vanadium	210	65.5	66.4	100.0	270.4
	Zinc	9120 J	1050.6	2602.0	2399.7	13653.1
	Total Cyanide	ND	NA	NA	NA	NA

**APPENDIX P.7**  
**SITE 69 SHALLOW GROUNDWATER DISSOLVED METALS**



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW01D-02	69-GW02-01	69-GW03D-02	69-GW04-01	69-GW05-01	69-GW06-01
Laboratory Sample ID:	AB8059	9401129-01A	AB7988	9401129-03A	9401120-03A	9401120-02A
Date Sampled:	08/26/94	01/22/94	08/25/94	01/22/94	01/21/94	01/21/94

	UNITS						
Aluminum	UG/L	564	1070.0 J	180	970.0 J	59.5 U	181.0
Antimony	UG/L	25 U	9.40 J	25 U	3.95 U	8.59 J	7.9 R
Arsenic	UG/L	1 U	1.45 UJ	1 U	1.45 UJ	1.45 U	1.45 U
Barium	UG/L	63.8	22.5	34	28.3	33.9	14.4
Beryllium	UG/L	0.5 U	0.65 U	0.5 U	0.65 U	0.65 U	0.65 U
Cadmium	UG/L	2.5 U	1.18 U	2.5 U	1.18 U	1.18 U	1.18 U
Calcium	UG/L	6600	9570.0 J	7190	2610.0 J	3680.0	2360.0
Chromium	UG/L	5 U	3.68 U	5 U	3.68 U	3.68 U	3.68 U
Cobalt	UG/L	5 U	9.7 U	5 U	9.7 U	9.7 U	9.7 U
Copper	UG/L	19.1	8.1 U	16.3	8.1 U	8.1 U	8.1 U
Iron	UG/L	146	2920.0 J	13400	80.2 J	26.3 U	708.0
Lead	UG/L	1 U	0.50 U	1 U	0.50 U	0.50 UJ	0.50 UJ
Magnesium	UG/L	3050	1180.0	511	826.0	1350.0	1750.0
Manganese	UG/L	49.3	83.6	124	139.0	52.3	31.6
Mercury	UG/L	0.25	0.050 U	0.1 U	0.050 U	0.032 U	0.032 U
Nickel	UG/L	10 U	6.8 U	10 U	6.8 U	6.8 U	6.8 U
Potassium	UG/L	1480	397.000 J	500 U	397.000 J	250.0 U	852.0
Selenium	UG/L	1 U	1.27 UJ	1 U	1.27 UJ	1.27 UJ	3.95 J
Silver	UG/L	2.5 U	0.200 UJ	2.5 U	0.200 UJ	0.200 U	0.200 U
Sodium	UG/L	16100	15000.0	8210	10800.0	8080.0	9310.0
Thallium	UG/L	1 U	2.30 U	1 U	2.30 U	2.30 U	2.30 U
Vanadium	UG/L	5 U	8.3 U	5 U	8.3 U	8.3 U	8.3 U
Zinc	UG/L	27	7.3 UJ	2490	7670.0 J	5.3 U	10.4 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Laboratory Sample ID:	9401131-01A	9401120-01A	9401119-03A	9401119-04A	9401119-02A	9401119-01A
Date Sampled:	01/22/94	01/21/94	01/20/94	01/20/94	01/20/94	01/20/94

	UNITS	69-GW07-01	69-GW08-01	69-GW09-01	69-GW10-01	69-GW11-01	69-GW12-01
Aluminum	UG/L	59.5 UJ	59.5 U	59.5 U	59.5 U	352.0	1690.0
Antimony	UG/L	3.95 UJ	12.5 J	8.59 J	18.0 J	10.2 J	8.59 J
Arsenic	UG/L	1.45 UJ	1.45 U	1.45 U	1.45 U	1.45 U	1.45 U
Barium	UG/L	19.2	6.9 U	14.4	21.7	34.0	6.9 U
Beryllium	UG/L	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Cadmium	UG/L	1.18 U	1.18 U	1.18 U	1.18 U	1.18 U	1.18 U
Calcium	UG/L	4220.0 J	5100.0	5670.0	3700.0	2120.0	764.0
Chromium	UG/L	3.68 U	3.68 U	3.68 U	3.68 U	3.68 U	3.68 U
Cobalt	UG/L	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Copper	UG/L	8.1 U	8.1 U	8.1 U	8.1 U	8.1 U	8.1 U
Iron	UG/L	26.3 U	26.3 U	54.3	77.6	56.5	345.0
Lead	UG/L	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	1.08 J
Magnesium	UG/L	1940.0	634.0	1740.0	1180.0	1890.0	368.0
Manganese	UG/L	8.45	14.1	67.6	27.9	18.6	13.0
Mercury	UG/L	0.052 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
Nickel	UG/L	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U
Potassium	UG/L	1120.00 J	250.0 U	852.0	627.0	514.0	1300.0
Selenium	UG/L	1.27 UJ	3.22 J	2.77 J	3.95 J	5.58 J	1.27 UJ
Silver	UG/L	0.200 UJ	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Sodium	UG/L	6080.00	5170.0	1030.0	5640.0	7990.0	4110.0
Thallium	UG/L	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U
Vanadium	UG/L	8.3 U	8.3 U	8.3 U	8.3 U	8.3 U	8.3 U
Zinc	UG/L	3.51 UJ	3.51 U	3.71 U	4.05 U	8.0 U	6.7 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 SHALLOW GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
Aluminum	UG/L	1690	442.0	532.7	718.2	2275.8
Antimony	UG/L	18 J	12.2	7.4	16.5	20.3
Arsenic	UG/L	ND	NA	NA	NA	NA
Barium	UG/L	63.8	25.0	15.6	33.1	41.9
Beryllium	UG/L	ND	NA	NA	NA	NA
Cadmium	UG/L	ND	NA	NA	NA	NA
Calcium	UG/L	9570 J	4465.3	2490.5	5756.6	7746.3
Chromium	UG/L	ND	NA	NA	NA	NA
Cobalt	UG/L	ND	NA	NA	NA	NA
Copper	UG/L	19.1	9.7	3.8	11.7	11.6
Iron	UG/L	13400	1488.9	3839.4	3479.4	24407.0
Lead	UG/L	1.08 J	0.6	0.2	0.8	0.8
Magnesium	UG/L	3050	1368.3	759.8	1762.2	2226.6
Manganese	UG/L	139	52.5	43.7	75.1	125.5
Mercury	UG/L	0.25	0.06	0.06	0.09	0.09
Nickel	UG/L	ND	NA	NA	NA	NA
Potassium	UG/L	1480	711.6	411.0	924.7	1126.2
Selenium	UG/L	5.58 J	2.3	1.5	3.1	3.7
Silver	UG/L	ND	NA	NA	NA	NA
Sodium	UG/L	16100	8126.7	4317.0	10364.9	15392.2
Thallium	UG/L	ND	NA	NA	NA	NA
Vanadium	UG/L	ND	NA	NA	NA	NA
Zinc	UG/L	7670 J	853.3	2262.2	2026.1	170263.4

**APPENDIX P.8**  
**SITE 69 DEEP GROUNDWATER ORGANICS**

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

	<u>UNITS</u>		
<u>SEMIVOLATILES</u>			
1,2-Dichlorobenzene	UG/L	6.65 U	10 U
1,2,4-Trichlorobenzene	UG/L	6.65 U	10 U
1,3-Dichlorobenzene	UG/L	6.65 U	10 U
1,4-Dichlorobenzene	UG/L	6.65 U	10 U
2-Chloronaphthalene	UG/L	6.65 U	10 U
2-Chlorophenol	UG/L	6.65 U	10 U
2-Methylnaphthalene	UG/L	6.65 U	10 U
2-Methylphenol	UG/L	6.65 U	10 U
2-Nitroaniline	UG/L	16.65 U	25 U
2-Nitrophenol	UG/L	6.65 U	10 U
2,2'-oxybis-(1-chloropropane)	UG/L	6.65 U	10 U
2,4-Dichlorophenol	UG/L	6.65 U	10 U
2,4-Dimethylphenol	UG/L	6.65 U	10 U
2,4-Dinitrophenol	UG/L	16.65 U	25 U
2,4-Dinitrotoluene	UG/L	6.65 U	10 U
2,4,5-Trichlorophenol	UG/L	16.65 U	25 U
2,4,6-Trichlorophenol	UG/L	6.65 U	10 U
2,6-Dinitrotoluene	UG/L	6.65 U	10 U
3-Nitroaniline	UG/L	16.65 UJ	25 UJ
3,3'-Dichlorobenzidine	UG/L	6.65 U	10 U
4-Bromophenyl-phenylether	UG/L	6.65 U	10 U
4-Chloro-3-methylphenol	UG/L	6.65 U	10 U
4-Chloroaniline	UG/L	6.65 U	10 U
4-Chlorophenyl phenyl ether	UG/L	6.65 U	10 U
4-Methylphenol	UG/L	6.65 U	10 U
4-Nitroaniline	UG/L	16.65 U	25 U
4-Nitrophenol	UG/L	16.65 U	25 U
4,6-Dinitro-2-methylphenol	UG/L	16.65 U	25 U
Acenaphthene	UG/L	6.65 U	10 U
Acenaphthylene	UG/L	6.65 U	10 U
Anthracene	UG/L	6.65 U	10 U
Benzo[a]anthracene	UG/L	6.65 U	10 U
Benzo[a]pyrene	UG/L	6.65 U	10 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	6.65 U	10 U
Benzo[g,h,i]perylene	UG/L	6.65 U	10 U
Benzo[k]fluoranthene	UG/L	6.65 U	10 U
bis(2-Chloroethoxy) methane	UG/L	6.65 U	10 U
bis(2-Chloroethyl) ether	UG/L	6.65 U	10 U
bis(2-Ethylhexyl)phthalate	UG/L	6.65 U	10 U
Butyl benzyl phthalate	UG/L	6.65 U	10 U
Carbazole	UG/L	6.65 U	10 U
Chrysene	UG/L	6.65 U	10 U
Dibenzofuran	UG/L	6.65 U	10 U
Dibenz[a,h]anthracene	UG/L	6.65 U	10 U
Diethylphthalate	UG/L	6.65 U	10 U
Dimethyl phthalate	UG/L	6.65 U	10 U
di-n-Butylphthalate	UG/L	6.65 U	10 U
di-n-Octylphthalate	UG/L	6.65 U	10 U
Fluoranthene	UG/L	6.65 U	10 U
Fluorene	UG/L	6.65 U	10 U
Hexachlorobenzene	UG/L	6.65 U	10 U
Hexachlorobutadiene	UG/L	6.65 U	10 U
Hexachlorocyclopentadiene	UG/L	6.65 U	10 U
Hexachloroethane	UG/L	6.65 U	10 U
Indeno[1,2,3-cd]pyrene	UG/L	6.65 U	10 U
Isophorone	UG/L	6.65 U	10 U
Naphthalene	UG/L	6.65 U	10 U
Nitrobenzene	UG/L	6.65 U	10 U
N-Nitroso-di-n-propylamine	UG/L	6.65 U	10 U
N-nitrosodiphenylamine	UG/L	6.65 U	10 U
Pentachlorophenol	UG/L	16.65 U	25 U
Phenanthrene	UG/L	6.65 U	10 U
Phenol	UG/L	6.65 U	10 U
Pyrene	UG/L	6.65 U	10 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

<u>VOLATILES</u>	<u>UNITS</u>		
Chloromethane	UG/L	5 U	5 U
Bromomethane	UG/L	5 U	5 U
Vinyl chloride	UG/L	8.37 J	5 U
Chloroethane	UG/L	5 U	5 U
Methylene chloride	UG/L	5 U	5 U
Acetone	UG/L	180	5 U
Carbon Disulfide	UG/L	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U
1,2-Dichloroethene(total)	UG/L	788	5 U
Chloroform	UG/L	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U
2-Butanone	UG/L	5 U	5 U
1,1,1-Trichloroethane	UG/L	5 U	5 U
Carbon tetrachloride	UG/L	5 U	5 U
Bromodichloromethane	UG/L	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U
cis-1,3-Dichloropropene	UG/L	5 U	5 U
Trichloroethene	UG/L	29.4	5 U
Dibromochloromethane	UG/L	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U
Benzene	UG/L	5 U	5 U
trans-1,3-Dichloropropene	UG/L	5 U	5 U
Bromoform	UG/L	5 U	5 U
4-Methyl-2-pentanone	UG/L	5 U	5 U
2-Hexanone	UG/L	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U
Toluene	UG/L	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U
Ethylbenzene	UG/L	5 U	5 U
Styrene	UG/L	5 U	5 U
Xylenes (total)	UG/L	5 U	5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

<u>PESTICIDE/PCBS</u>	<u>UNITS</u>		
alpha-BHC	UG/L	0.0305 UJ	0.03 UJ
beta-BHC	UG/L	0.0305 UJ	0.03 UJ
delta-BHC	UG/L	0.0305 UJ	0.03 UJ
Lindane (gamma-BHC)	UG/L	0.0305 UJ	0.03 UJ
Heptachlor	UG/L	0.03 UJ	0.03 UJ
Aldrin	UG/L	0.0305 UJ	0.03 UJ
Heptachlor epoxide	UG/L	0.0305 UJ	0.03 UJ
Endosulfan I	UG/L	0.0305 UJ	0.03 UJ
Dieldrin	UG/L	0.061 UJ	0.0595 UJ
4,4'-DDE	UG/L	0.061 UJ	0.0595 UJ
Endrin	UG/L	0.061 UJ	0.0595 UJ
Endosulfan II	UG/L	0.061 UJ	0.0595 UJ
4,4'-DDD	UG/L	0.061 UJ	0.0595 UJ
Endosulfan sulfate	UG/L	0.061 UJ	0.0595 UJ
4,4'-DDT	UG/L	0.061 UJ	0.0595 UJ
Methoxychlor	UG/L	0.305 UJ	0.2975 UJ
Endrin ketone	UG/L	0.061 UJ	0.0595 UJ
Endrin aldehyde	UG/L	0.061 UJ	0.0595 UJ
alpha-Chlordane	UG/L	0.0305 UJ	0.03 UJ
gamma-Chlordane	UG/L	0.0305 UJ	0.03 UJ
Toxaphene	UG/L	3.05 UJ	2.975 UJ
Aroclor 1016	UG/L	0.61 UJ	0.595 UJ
Aroclor 1221	UG/L	1.22 UJ	1.19 UJ
Aroclor 1232	UG/L	0.61 UJ	0.595 UJ
Aroclor 1242	UG/L	0.61 UJ	0.595 UJ
Aroclor 1248	UG/L	0.61 UJ	0.595 UJ
Aroclor 1254	UG/L	0.61 UJ	0.595 UJ
Aroclor 1260	UG/L	0.61 UJ	0.595 UJ



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:		

	<u>UNITS</u>		
<u>CHEMICAL SURETY</u>			
Acetophenone	UG/L	6.65 U	10 U
Chloroacetophenone	UG/L	6.65 U	10 U
Hydroxyacetophenone	UG/L	33.3 U	50 U
Bis(2'-chloroethyl)disulfide	UG/L	33.3 U	50 U
Bis(2'-chloroethyl)trisulfide	UG/L	33.3 U	50 U
1,4-Dithiane	UG/L	6.65 U	10 U
1,4-Oxathiane	UG/L	6.65 U	10 U
<u>THIODIGLYCOL</u>			
Thiodiglycol	UG/L	12.5 U	12.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>SEMIVOLATILES</u>					
	1,2-Dichlorobenzene	UG/L	ND	NA	NA	NA
	1,2,4-Trichlorobenzene	UG/L	ND	NA	NA	NA
	1,3-Dichlorobenzene	UG/L	ND	NA	NA	NA
	1,4-Dichlorobenzene	UG/L	ND	NA	NA	NA
	2-Chloronaphthalene	UG/L	ND	NA	NA	NA
	2-Chlorophenol	UG/L	ND	NA	NA	NA
	2-Methylnaphthalene	UG/L	ND	NA	NA	NA
	2-Methylphenol	UG/L	ND	NA	NA	NA
	2-Nitroaniline	UG/L	ND	NA	NA	NA
	2-Nitrophenol	UG/L	ND	NA	NA	NA
	2,2'-oxybis-(1-chloropropane)	UG/L	ND	NA	NA	NA
	2,4-Dichlorophenol	UG/L	ND	NA	NA	NA
	2,4-Dimethylphenol	UG/L	ND	NA	NA	NA
	2,4-Dinitrophenol	UG/L	ND	NA	NA	NA
	2,4-Dinitrotoluene	UG/L	ND	NA	NA	NA
	2,4,5-Trichlorophenol	UG/L	ND	NA	NA	NA
	2,4,6-Trichlorophenol	UG/L	ND	NA	NA	NA
	2,6-Dinitrotoluene	UG/L	ND	NA	NA	NA
	3-Nitroaniline	UG/L	ND	NA	NA	NA
	3,3'-Dichlorobenzidine	UG/L	ND	NA	NA	NA
	4-Bromophenyl-phenylether	UG/L	ND	NA	NA	NA
	4-Chloro-3-methylphenol	UG/L	ND	NA	NA	NA
	4-Chloroaniline	UG/L	ND	NA	NA	NA
	4-Chlorophenyl phenyl ether	UG/L	ND	NA	NA	NA
	4-Methylphenol	UG/L	ND	NA	NA	NA
	4-Nitroaniline	UG/L	ND	NA	NA	NA
	4-Nitrophenol	UG/L	ND	NA	NA	NA
	4,6-Dinitro-2-methylphenol	UG/L	ND	NA	NA	NA
	Acenaphthene	UG/L	ND	NA	NA	NA
	Acenaphthylene	UG/L	ND	NA	NA	NA
	Anthracene	UG/L	ND	NA	NA	NA
	Benzo[a]anthracene	UG/L	ND	NA	NA	NA
	Benzo[a]pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>SEMIVOLATILES Cont.</u>					
Benzo[b]fluoranthene	UG/L	ND	NA	NA	NA
Benzo[g,h,i]perylene	UG/L	ND	NA	NA	NA
Benzo[k]fluoranthene	UG/L	ND	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/L	ND	NA	NA	NA
bis(2-Chloroethyl) ether	UG/L	ND	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/L	ND	NA	NA	NA
Butyl benzyl phthalate	UG/L	ND	NA	NA	NA
Carbazole	UG/L	ND	NA	NA	NA
Chrysene	UG/L	ND	NA	NA	NA
Dibenzofuran	UG/L	ND	NA	NA	NA
Dibenz[a,h]anthracene	UG/L	ND	NA	NA	NA
Diethylphthalate	UG/L	ND	NA	NA	NA
Dimethyl phthalate	UG/L	ND	NA	NA	NA
di-n-Butylphthalate	UG/L	ND	NA	NA	NA
di-n-Octylphthalate	UG/L	ND	NA	NA	NA
Fluoranthene	UG/L	ND	NA	NA	NA
Fluorene	UG/L	ND	NA	NA	NA
Hexachlorobenzene	UG/L	ND	NA	NA	NA
Hexachlorobutadiene	UG/L	ND	NA	NA	NA
Hexachlorocyclopentadiene	UG/L	ND	NA	NA	NA
Hexachloroethane	UG/L	ND	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/L	ND	NA	NA	NA
Isophorone	UG/L	ND	NA	NA	NA
Naphthalene	UG/L	ND	NA	NA	NA
Nitrobenzene	UG/L	ND	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/L	ND	NA	NA	NA
N-nitrosodiphenylamine	UG/L	ND	NA	NA	NA
Pentachlorophenol	UG/L	ND	NA	NA	NA
Phenanthrene	UG/L	ND	NA	NA	NA
Phenol	UG/L	ND	NA	NA	NA
Pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	UNITS	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<b><u>VOLATILES</u></b>						
	Chloromethane	UG/L	ND	NA	NA	NA
	Bromomethane	UG/L	ND	NA	NA	NA
	Vinyl chloride	UG/L	8.37 J	6.7	2.4	17.3
	Chloroethane	UG/L	ND	NA	NA	NA
	Methylene chloride	UG/L	ND	NA	NA	NA
	Acetone	UG/L	180	92.5	123.7	645.0
	Carbon Disulfide	UG/L	ND	NA	NA	NA
	1,1-Dichloroethene	UG/L	ND	NA	NA	NA
	1,1-Dichloroethane	UG/L	ND	NA	NA	NA
	1,2-Dichloroethene(total)	UG/L	788	396.5	553.7	2868.4
	Chloroform	UG/L	ND	NA	NA	NA
	1,2-Dichloroethane	UG/L	ND	NA	NA	NA
	2-Butanone	UG/L	ND	NA	NA	NA
	1,1,1-Trichloroethane	UG/L	ND	NA	NA	NA
	Carbon tetrachloride	UG/L	ND	NA	NA	NA
	Bromodichloromethane	UG/L	ND	NA	NA	NA
	1,2-Dichloropropane	UG/L	ND	NA	NA	NA
	cis-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
	Trichloroethene	UG/L	29.4	17.2	17.3	94.2
	Dibromochloromethane	UG/L	ND	NA	NA	NA
	1,1,2,2-Tetrachloroethane	UG/L	ND	NA	NA	NA
	Benzene	UG/L	ND	NA	NA	NA
	trans-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
	Bromoform	UG/L	ND	NA	NA	NA
	4-Methyl-2-pentanone	UG/L	ND	NA	NA	NA
	2-Hexanone	UG/L	ND	NA	NA	NA
	Tetrachloroethene	UG/L	ND	NA	NA	NA
	1,1,2,2-Tetrachloroethane	UG/L	ND	NA	NA	NA
	Toluene	UG/L	ND	NA	NA	NA
	Chlorobenzene	UG/L	ND	NA	NA	NA
	Ethylbenzene	UG/L	ND	NA	NA	NA
	Styrene	UG/L	ND	NA	NA	NA
	Xylenes (total)	UG/L	ND	NA	NA	NA

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**DEEP GROUNDWATER**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**ORGANICS**

Client Sample ID: Laboratory Sample ID: Date Sampled:	UNITS	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<b>PESTICIDE/PCBS</b>						
alpha-BHC	UG/L	ND	NA	NA	NA	NA
beta-BHC	UG/L	ND	NA	NA	NA	NA
delta-BHC	UG/L	ND	NA	NA	NA	NA
Lindane (gamma-BHC)	UG/L	ND	NA	NA	NA	NA
Heptachlor	UG/L	ND	NA	NA	NA	NA
Aldrin	UG/L	ND	NA	NA	NA	NA
Heptachlor epoxide	UG/L	ND	NA	NA	NA	NA
Endosulfan I	UG/L	ND	NA	NA	NA	NA
Dieldrin	UG/L	ND	NA	NA	NA	NA
4,4'-DDE	UG/L	ND	NA	NA	NA	NA
Endrin	UG/L	ND	NA	NA	NA	NA
Endosulfan II	UG/L	ND	NA	NA	NA	NA
4,4'-DDD	UG/L	ND	NA	NA	NA	NA
Endosulfan sulfate	UG/L	ND	NA	NA	NA	NA
4,4'-DDT	UG/L	ND	NA	NA	NA	NA
Methoxychlor	UG/L	ND	NA	NA	NA	NA
Endrin ketone	UG/L	ND	NA	NA	NA	NA
Endrin aldehyde	UG/L	ND	NA	NA	NA	NA
alpha-Chlordane	UG/L	ND	NA	NA	NA	NA
gamma-Chlordane	UG/L	ND	NA	NA	NA	NA
Toxaphene	UG/L	ND	NA	NA	NA	NA
Aroclor 1016	UG/L	ND	NA	NA	NA	NA
Aroclor 1221	UG/L	ND	NA	NA	NA	NA
Aroclor 1232	UG/L	ND	NA	NA	NA	NA
Aroclor 1242	UG/L	ND	NA	NA	NA	NA
Aroclor 1248	UG/L	ND	NA	NA	NA	NA
Aroclor 1254	UG/L	ND	NA	NA	NA	NA
Aroclor 1260	UG/L	ND	NA	NA	NA	NA

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**DEEP GROUNDWATER**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**ORGANICS**

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>CHEMICAL SURETY</u>					
	Acetophenone	UG/L	ND	NA	NA	NA
	Chloroacetophenone	UG/L	ND	NA	NA	NA
	Hydroxyacetophenone	UG/L	ND	NA	NA	NA
	Bis(2'-chloroethyl)disulfide	UG/L	ND	NA	NA	NA
	Bis(2'-chloroethyl)trisulfide	UG/L	ND	NA	NA	NA
	1,4-Dithiane	UG/L	ND	NA	NA	NA
	1,4-Oxathiane	UG/L	ND	NA	NA	NA
	<u>THIODIGLYCOL</u>					
	Thiodiglycol	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69GW02DD	69GW02DW	69GW03DW	69GW12DW	69GW13DW	69GW14DW
Laboratory Sample ID:	NA	NA	NA	NA	NA	NA
Date Sampled:	02/24/95	02/24/95	02/25/95	02/23/95	02/22/95	02/23/95

	<u>UNITS</u>						
<u>PURGEABLE HALOCARBONS 601</u>							
Bromodichloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromoform	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromomethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Carbon Tetrachloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Chlorovinyl ether	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloroform	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dibromochloromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dichlorodifluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene	UG/L	2.5 U	8	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloropropane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methylene Chloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2,2-Tetrachloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Tetrachloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,1-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,2-Trichloroethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichlorofluoromethane	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl Chloride	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69GW14IW  
 Laboratory Sample ID: NA  
 Date Sampled: 02/23/95

	UNITS	
<u>PURGEABLE HALOCARBONS 601</u>		
Bromodichloromethane	UG/L	2.5 U
Bromoform	UG/L	2.5 U
Bromomethane	UG/L	2.5 U
Carbon Tetrachloride	UG/L	2.5 U
Chlorobenzene	UG/L	2.5 U
Chloroethane	UG/L	2.5 U
2-Chlorovinyl ether	UG/L	2.5 U
Chloroform	UG/L	2.5 U
Chloromethane	UG/L	2.5 U
Dibromochloromethane	UG/L	2.5 U
1,2-Dichlorobenzene	UG/L	2.5 U
1,3-Dichlorobenzene	UG/L	2.5 U
1,4-Dichlorobenzene	UG/L	2.5 U
Dichlorodifluoromethane	UG/L	2.5 U
1,1-Dichloroethane	UG/L	2.5 U
1,2-Dichloroethane	UG/L	2.5 U
1,1-Dichloroethene	UG/L	2.5 U
trans-1,2-Dichloroethene	UG/L	2.5 U
1,2-Dichloropropane	UG/L	2.5 U
cis-1,3-Dichloropropene	UG/L	2.5 U
trans-1,3-Dichloropropene	UG/L	2.5 U
Methylene Chloride	UG/L	2.5 U
1,1,2,2,-Tetrachloroethane	UG/L	2.5 U
Tetrachloroethene	UG/L	2.5 U
Trichloroethene	UG/L	2.5 U
1,1,1-Trichloroethane	UG/L	2.5 U
1,1,2-Trichloroethane	UG/L	2.5 U
Trichlorofluoromethane	UG/L	2.5 U
Vinyl Chloride	UG/L	2.5 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 14 (SITE 69)  
 ROUND TWO GROUNDWATER - DEEP WELLS  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG UPPER 95% CONFIDENCE INTERVAL
<u>UNITS</u>					
<u>PURGEABLE HALOCARBONS 601</u>					
Bromodichloromethane	UG/L	ND	NA	NA	NA
Bromoform	UG/L	ND	NA	NA	NA
Bromomethane	UG/L	ND	NA	NA	NA
Carbon Tetrachloride	UG/L	ND	NA	NA	NA
Chlorobenzene	UG/L	ND	NA	NA	NA
Chloroethane	UG/L	ND	NA	NA	NA
2-Chlorovinyl ether	UG/L	ND	NA	NA	NA
Chloroform	UG/L	ND	NA	NA	NA
Chloromethane	UG/L	ND	NA	NA	NA
Dibromochloromethane	UG/L	ND	NA	NA	NA
1,2-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,3-Dichlorobenzene	UG/L	ND	NA	NA	NA
1,4-Dichlorobenzene	UG/L	ND	NA	NA	NA
Dichlorodifluoromethane	UG/L	ND	NA	NA	NA
1,1-Dichloroethane	UG/L	ND	NA	NA	NA
1,2-Dichloroethane	UG/L	ND	NA	NA	NA
1,1-Dichloroethene	UG/L	ND	NA	NA	NA
trans-1,2-Dichloroethene	UG/L	8	3.29	2.08	4.81
1,2-Dichloropropane	UG/L	ND	NA	NA	NA
cis-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
trans-1,3-Dichloropropene	UG/L	ND	NA	NA	NA
Methylene Chloride	UG/L	ND	NA	NA	NA
1,1,2,2,-Tetrachloroethane	UG/L	ND	NA	NA	NA
Tetrachloroethene	UG/L	ND	NA	NA	NA
Trichloroethene	UG/L	ND	NA	NA	NA
1,1,1-Trichloroethane	UG/L	ND	NA	NA	NA
1,1,2-Trichloroethane	UG/L	ND	NA	NA	NA
Trichlorofluoromethane	UG/L	ND	NA	NA	NA
Vinyl Chloride	UG/L	ND	NA	NA	NA

**APPENDIX P.9**  
**SITE 69 DEEP GROUNDWATER TOTAL METALS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID:	69-GW02-DW-01	69-GW12DW-01
Laboratory Sample ID:	9402153-01	9402150-01
Date Sampled:	34382	34383

---

	<u>UNITS</u>		
Aluminum	UG/L	3030	4680 J
Antimony	UG/L	3.8 U	3.8 U
Arsenic	UG/L	1.1 U	3.54 J
Barium	UG/L	42.3	58
Beryllium	UG/L	0.38 U	0.89
Cadmium	UG/L	1.595 U	1.595 U
Calcium	UG/L	59300	180000
Chromium	UG/L	4.155 U	20.7
Cobalt	UG/L	8 U	8 U
Copper	UG/L	8.15 U	8.15 U
Iron	UG/L	5820	10900
Lead	UG/L	3.1	3.42 U
Magnesium	UG/L	2590	4890
Manganese	UG/L	53.7	114
Mercury	UG/L	0.174	0.078 U
Nickel	UG/L	14.4 U	14.4 U
Potassium	UG/L	1850	1660
Selenium	UG/L	0.8 U	0.8 UJ
Silver	UG/L	0.8 U	0.8 U
Sodium	UG/L	33000	10900
Thallium	UG/L	1.5 U	1.5 U
Vanadium	UG/L	10.2 U	10.2 U
Zinc	UG/L	31.1	24.35 U
Total Cyanide	UG/L	2.5 U	2.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL TOTAL METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>				
Aluminum	UG/L 4680 J	3855.0	1166.7	9064.1	NA
Antimony	UG/L ND	NA	NA	NA	NA
Arsenic	UG/L 3.54 J	2.3	1.7	10.0	NA
Barium	UG/L 58	50.2	11.1	99.7	NA
Beryllium	UG/L 0.89	0.6	0.4	2.2	NA
Cadmium	UG/L ND	NA	NA	NA	NA
Calcium	UG/L 180000	119650.0	85347.8	500699.9	NA
Chromium	UG/L 20.7	12.4	11.7	64.7	NA
Cobalt	UG/L ND	NA	NA	NA	NA
Copper	UG/L ND	NA	NA	NA	NA
Iron	UG/L 10900	8360.0	3592.1	24397.6	NA
Lead	UG/L 3.1	3.3	0.2	4.3	NA
Magnesium	UG/L 4890	3740.0	1626.3	11001.1	NA
Manganese	UG/L 114	83.9	42.6	274.2	NA
Mercury	UG/L 0.174	0.1	0.1	0.4	NA
Nickel	UG/L ND	NA	NA	NA	NA
Potassium	UG/L 1850	1755.0	134.4	2354.8	NA
Selenium	UG/L ND	NA	NA	NA	NA
Silver	UG/L ND	NA	NA	NA	NA
Sodium	UG/L 33000	21950.0	15627.1	91719.7	NA
Thallium	UG/L ND	NA	NA	NA	NA
Vanadium	UG/L ND	NA	NA	NA	NA
Zinc	UG/L 31.1	27.7	4.8	49.0	NA
Total Cyanide	UG/L ND	NA	NA	NA	NA

**APPENDIX P.10**

**SITE 69 DEEP GROUNDWATER DISSOLVED METALS**

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 DEEP GROUNDWATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL DISSOLVED METALS

Client Sample ID:	69-GW02DWD-01	69-GW12DWD-01
Laboratory Sample ID:	9402153-03	9402150-02
Date Sampled:	34382	34383

---

	<u>UNITS</u>		
Aluminum	UG/L	69.5 UJ	69.5 UJ
Antimony	UG/L	3.8 U	3.8 U
Arsenic	UG/L	1.1 U	1.1 U
Barium	UG/L	19.8	23.3
Beryllium	UG/L	0.38 U	0.38 U
Cadmium	UG/L	1,595 U	1,595 U
Calcium	UG/L	37600	63600
Chromium	UG/L	4.155 U	4.155 U
Cobalt	UG/L	8 U	8 U
Copper	UG/L	8.15 U	8.15 U
Iron	UG/L	27.45 U	27.45 U
Lead	UG/L	0.5 U	0.5 U
Magnesium	UG/L	2130	2880
Manganese	UG/L	11.5	60.1
Mercury	UG/L	0.073 U	0.078 U
Nickel	UG/L	14.4 U	14.4 U
Potassium	UG/L	1670	1660
Selenium	UG/L	0.8 UJ	0.8 UJ
Silver	UG/L	0.8 U	0.8 U
Sodium	UG/L	34700	13700
Thallium	UG/L	1.5 U	1.5 U
Vanadium	UG/L	10.2 U	10.2 U
Zinc	UG/L	5.3 U	5.3 U

**STATISTICAL SUMMARY**  
**OPERABLE UNIT NO. 4 (SITE 69)**  
**DEEP GROUNDWATER**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**  
**REMEDIAL INVESTIGATION - CTO-0212**  
**TAL DISSOLVED METALS**

Client Sample ID:					NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Laboratory Sample ID:	MAXIMUM	ARITHMETIC	STANDARD			
Date Sampled:	DETECTED	MEAN	DEVIATION			
	<u>UNITS</u>					
Aluminum	UG/L	ND	NA	NA	NA	NA
Antimony	UG/L	ND	NA	NA	NA	NA
Arsenic	UG/L	ND	NA	NA	NA	NA
Barium	UG/L	23.3	21.6	2.5	32.6	NA
Beryllium	UG/L	ND	NA	NA	NA	NA
Cadmium	UG/L	ND	NA	NA	NA	NA
Calcium	UG/L	63600	50600.0	18384.8	132682.0	NA
Chromium	UG/L	ND	NA	NA	NA	NA
Cobalt	UG/L	ND	NA	NA	NA	NA
Copper	UG/L	ND	NA	NA	NA	NA
Iron	UG/L	ND	NA	NA	NA	NA
Lead	UG/L	ND	NA	NA	NA	NA
Magnesium	UG/L	2880	2505.0	530.3	4872.8	NA
Manganese	UG/L	60.1	35.8	34.4	189.2	NA
Mercury	UG/L	ND	NA	NA	NA	NA
Nickel	UG/L	ND	NA	NA	NA	NA
Potassium	UG/L	1670	1665.0	7.1	1696.6	NA
Selenium	UG/L	ND	NA	NA	NA	NA
Silver	UG/L	ND	NA	NA	NA	NA
Sodium	UG/L	34700	24200.0	14849.2	90497.0	NA
Thallium	UG/L	ND	NA	NA	NA	NA
Vanadium	UG/L	ND	NA	NA	NA	NA
Zinc	UG/L	ND	NA	NA	NA	NA

**APPENDIX P.11**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SURFACE WATER ORGANICS**

---



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

SEMIVOLATILES

1,2-Dichlorobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
1,2,4-Trichlorobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
1,3-Dichlorobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
1,4-Dichlorobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2-Chloronaphthalene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2-Chlorophenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2-Methylnaphthalene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2-Methylphenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2-Nitroaniline	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
2-Nitrophenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,2'-oxybis-(1-chloropropane)	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,4-Dichlorophenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,4-Dimethylphenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,4-Dinitrophenol	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
2,4-Dinitrotoluene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,4,5-Trichlorophenol	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
2,4,6-Trichlorophenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
2,6-Dinitrotoluene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
3-Nitroaniline	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
3,3'-Dichlorobenzidine	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Bromophenyl-phenylether	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Chloro-3-methylphenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Chloroaniline	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Chlorophenyl phenyl ether	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Methylphenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
4-Nitroaniline	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
4-Nitrophenol	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
4,6-Dinitro-2-methylphenol	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
Acenaphthene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Acenaphthylene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Anthracene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Benzo[a]anthracene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Benzo[a]pyrene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Benzo[g,h,i]perylene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Benzo[k]fluoranthene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
bis(2-Chloroethoxy) methane	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
bis(2-Chloroethyl) ether	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
bis(2-Ethylhexyl)phthalate	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Butyl benzyl phthalate	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Carbazole	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Chrysene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Dibenzofuran	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Dibenz[a,h]anthracene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Diethylphthalate	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Dimethyl phthalate	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
di-n-Butylphthalate	UG/L	5.2 U	5.6 U	5.9 U	1.00 J	6.8 U	10.0 U
di-n-Octylphthalate	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Fluoranthene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Fluorene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Hexachlorobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Hexachlorobutadiene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Hexachlorocyclopentadiene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Hexachloroethane	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Indeno[1,2,3-cd]pyrene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Isophorone	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Naphthalene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Nitrobenzene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
N-Nitroso-di-n-propylamine	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
N-nitrosodiphenylamine	UG/L	5.2 UJ	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Pentachlorophenol	UG/L	13.0 U	13.9 U	14.8 U	16.9 U	16.9 U	25.0 U
Phenanthrene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Phenol	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U
Pyrene	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	6.8 U	10.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

VOLATILES

Chloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	8.00 J	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Acetone	UG/L	5.00 U	5.00 U	5.00 U	3.00 J	5.0 U
Carbon Disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene(total)	UG/L	55.0	13.0	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	2.00 J	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	4.00 J	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	UG/L	5.0 U	1.00 J	5.0 U	1.00 J	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	1.00 J	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	UG/L	5.0 U	5.0 U	5.0 U	10.0	5.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94

UNITS

PESTICIDE/PCBS

	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
alpha-BHC	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
beta-BHC	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
delta-BHC	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Lindane (gamma-BHC)	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Heptachlor	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Aldrin	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Heptachlor epoxide	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Endosulfan I	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Dieldrin	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
4,4'-DDE	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
Endrin	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
Endosulfan II	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
4,4'-DDD	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
Endosulfan sulfate	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
4,4'-DDT	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
Methoxychlor	UG/L	0.261 UJ	0.275 UJ	0.250 UJ	0.338 UJ	0.325 UJ
Endrin ketone	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
Endrin aldehyde	UG/L	0.052 UJ	0.055 UJ	0.050 UJ	0.068 UJ	0.065 UJ
alpha-Chlordane	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
gamma-Chlordane	UG/L	0.026 UJ	0.028 UJ	0.025 UJ	0.034 UJ	0.033 UJ
Toxaphene	UG/L	2.61 UJ	2.75 UJ	2.50 UJ	3.38 UJ	3.25 UJ
Aroclor 1016	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ
Aroclor 1221	UG/L	1.04 UJ	1.10 UJ	1.00 UJ	1.35 UJ	1.30 UJ
Aroclor 1232	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ
Aroclor 1242	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ
Aroclor 1248	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ
Aroclor 1254	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ
Aroclor 1260	UG/L	0.52 UJ	0.55 UJ	0.50 UJ	0.68 UJ	0.65 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-0S-SW01	69-0S-SW02	69-0S-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94
<u>UNITS</u>						
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	10.0 U
Chloroacetophenone	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	10.0 U
Hydroxyacetophenone	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	50.0 U
Bis(2'-chloroethyl)disulfide	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	50.0 U
Bis(2'-chloroethyl)trisulfide	UG/L	26.0 U	27.8 U	29.5 U	33.8 U	50.0 U
1,4-Dithiane	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	10.0 U
1,4-Oxathiane	UG/L	5.2 U	5.6 U	5.9 U	6.8 U	10.0 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	UG/L	12.5 UJ	12.5 UJ	12.5 UJ	12.5 UJ	12.5 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	UNITS	
<u>SEMIVOLATILES</u>		
1,2-Dichlorobenzene	UG/L	5.9 U
1,2,4-Trichlorobenzene	UG/L	5.9 U
1,3-Dichlorobenzene	UG/L	5.9 U
1,4-Dichlorobenzene	UG/L	5.9 U
2-Chloronaphthalene	UG/L	5.9 U
2-Chlorophenol	UG/L	5.9 U
2-Methylnaphthalene	UG/L	5.9 U
2-Methylphenol	UG/L	5.9 U
2-Nitroaniline	UG/L	14.8 U
2-Nitrophenol	UG/L	5.9 U
2,2'-oxybis-(1-chloropropane)	UG/L	5.9 U
2,4-Dichlorophenol	UG/L	5.9 U
2,4-Dimethylphenol	UG/L	5.9 U
2,4-Dinitrophenol	UG/L	14.8 U
2,4-Dinitrotoluene	UG/L	5.9 U
2,4,5-Trichlorophenol	UG/L	14.8 U
2,4,6-Trichlorophenol	UG/L	5.9 U
2,6-Dinitrotoluene	UG/L	5.9 U
3-Nitroaniline	UG/L	14.8 U
3,3'-Dichlorobenzidine	UG/L	5.9 U
4-Bromophenyl-phenylether	UG/L	5.9 U
4-Chloro-3-methylphenol	UG/L	5.9 U
4-Chloroaniline	UG/L	5.9 U
4-Chlorophenyl phenyl ether	UG/L	5.9 U
4-Methylphenol	UG/L	5.9 U
4-Nitroaniline	UG/L	14.8 U
4-Nitrophenol	UG/L	14.8 U
4,6-Dinitro-2-methylphenol	UG/L	14.8 U
Acenaphthene	UG/L	5.9 U
Acenaphthylene	UG/L	5.9 U
Anthracene	UG/L	5.9 U
Benzo[a]anthracene	UG/L	5.9 U
Benzo[a]pyrene	UG/L	5.9 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

UNITS

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/L	5.9 U
Benzo[g,h,i]perylene	UG/L	5.9 U
Benzo[k]fluoranthene	UG/L	5.9 U
bis(2-Chloroethoxy) methane	UG/L	5.9 U
bis(2-Chloroethyl) ether	UG/L	5.9 U
bis(2-Ethylhexyl)phthalate	UG/L	5.9 U
Butyl benzyl phthalate	UG/L	5.9 U
Carbazole	UG/L	5.9 U
Chrysene	UG/L	5.9 U
Dibenzofuran	UG/L	5.9 U
Dibenz[a,h]anthracene	UG/L	5.9 U
Diethylphthalate	UG/L	5.9 U
Dimethyl phthalate	UG/L	5.9 U
di-n-Butylphthalate	UG/L	5.9 U
di-n-Octylphthalate	UG/L	5.9 U
Fluoranthene	UG/L	5.9 U
Fluorene	UG/L	5.9 U
Hexachlorobenzene	UG/L	5.9 U
Hexachlorobutadiene	UG/L	5.9 U
Hexachlorocyclopentadiene	UG/L	5.9 U
Hexachloroethane	UG/L	5.9 U
Indeno[1,2,3-cd]pyrene	UG/L	5.9 U
Isophorone	UG/L	5.9 U
Naphthalene	UG/L	5.9 U
Nitrobenzene	UG/L	5.9 U
N-Nitroso-di-n-propylamine	UG/L	5.9 U
N-nitrosodiphenylamine	UG/L	5.9 U
Pentachlorophenol	UG/L	14.8 U
Phenanthrene	UG/L	5.9 U
Phenol	UG/L	5.9 U
Pyrene	UG/L	5.9 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	<u>UNITS</u>	
<u>VOLATILES</u>		
Chloromethane	UG/L	5.0 U
Bromomethane	UG/L	5.0 U
Vinyl chloride	UG/L	5.0 U
Chloroethane	UG/L	5.0 U
Methylene chloride	UG/L	5.00 U
Acetone	UG/L	9.00 J
Carbon Disulfide	UG/L	5.0 U
1,1-Dichloroethene	UG/L	5.0 U
1,1-Dichloroethane	UG/L	5.0 U
1,2-Dichloroethene(total)	UG/L	5.0 U
Chloroform	UG/L	5.0 U
1,2-Dichloroethane	UG/L	5.0 U
2-Butanone	UG/L	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U
Carbon tetrachloride	UG/L	5.0 U
Bromodichloromethane	UG/L	5.0 U
1,2-Dichloropropane	UG/L	5.0 U
cis-1,3-Dichloropropene	UG/L	5.0 U
Trichloroethene	UG/L	5.0 U
Dibromochloromethane	UG/L	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U
Benzene	UG/L	5.0 U
trans-1,3-Dichloropropene	UG/L	5.0 U
Bromoform	UG/L	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U
2-Hexanone	UG/L	5.0 U
Tetrachloroethene	UG/L	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U
Toluene	UG/L	5.0 U
Chlorobenzene	UG/L	5.0 U
Ethylbenzene	UG/L	5.0 U
Styrene	UG/L	5.0 U
Xylenes (total)	UG/L	5.0 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-DA-SW04  
 Laboratory Sample ID: 9401053-03A  
 Date Sampled: 01/09/94

	<u>UNITS</u>	
<u>PESTICIDE/PCBS</u>		
alpha-BHC	UG/L	0.027 UJ
beta-BHC	UG/L	0.027 UJ
delta-BHC	UG/L	0.027 UJ
Lindane (gamma-BHC)	UG/L	0.027 UJ
Heptachlor	UG/L	0.027 UJ
Aldrin	UG/L	0.027 UJ
Heptachlor epoxide	UG/L	0.027 UJ
Endosulfan I	UG/L	0.027 UJ
Dieldrin	UG/L	0.053 UJ
4,4'-DDE	UG/L	0.053 UJ
Endrin	UG/L	0.053 UJ
Endosulfan II	UG/L	0.053 UJ
4,4'-DDD	UG/L	0.053 UJ
Endosulfan sulfate	UG/L	0.053 UJ
4,4'-DDT	UG/L	0.053 UJ
Methoxychlor	UG/L	0.266 UJ
Endrin ketone	UG/L	0.053 UJ
Endrin aldehyde	UG/L	0.053 UJ
alpha-Chlordane	UG/L	0.027 UJ
gamma-Chlordane	UG/L	0.027 UJ
Toxaphene	UG/L	2.66 UJ
Aroclor 1016	UG/L	0.53 UJ
Aroclor 1221	UG/L	1.07 UJ
Aroclor 1232	UG/L	0.53 UJ
Aroclor 1242	UG/L	0.53 UJ
Aroclor 1248	UG/L	0.53 UJ
Aroclor 1254	UG/L	0.53 UJ
Aroclor 1260	UG/L	0.53 UJ

STATISTICAL SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SURFACE WATER  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
ORGANICS

Client Sample ID: 69-DA-SW04  
Laboratory Sample ID: 9401053-03A  
Date Sampled: 01/09/94

---

	<u>UNITS</u>	
<u>CHEMICAL SURETY</u>		
Acetophenone	UG/L	5.9 U
Chloroacetophenone	UG/L	5.9 U
Hydroxyacetophenone	UG/L	29.5 U
Bis(2'-chloroethyl)disulfide	UG/L	29.5 U
Bis(2'-chloroethyl)trisulfide	UG/L	29.5 U
1,4-Dithiane	UG/L	5.9 U
1,4-Oxathiane	UG/L	5.9 U
<u>THIODIGLYCOL</u>		
Thiodiglycol	UG/L	12.5 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>SEMIVOLATILES</u>					
	1,2-Dichlorobenzene	UG/L	ND	NA	NA	NA
	1,2,4-Trichlorobenzene	UG/L	ND	NA	NA	NA
	1,3-Dichlorobenzene	UG/L	ND	NA	NA	NA
	1,4-Dichlorobenzene	UG/L	ND	NA	NA	NA
	2-Chloronaphthalene	UG/L	ND	NA	NA	NA
	2-Chlorophenol	UG/L	ND	NA	NA	NA
	2-Methylnaphthalene	UG/L	ND	NA	NA	NA
	2-Methylphenol	UG/L	ND	NA	NA	NA
	2-Nitroaniline	UG/L	ND	NA	NA	NA
	2-Nitrophenol	UG/L	ND	NA	NA	NA
	2,2'-oxybis-(1-chloropropane)	UG/L	ND	NA	NA	NA
	2,4-Dichlorophenol	UG/L	ND	NA	NA	NA
	2,4-Dimethylphenol	UG/L	ND	NA	NA	NA
	2,4-Dinitrophenol	UG/L	ND	NA	NA	NA
	2,4-Dinitrotoluene	UG/L	ND	NA	NA	NA
	2,4,5-Trichlorophenol	UG/L	ND	NA	NA	NA
	2,4,6-Trichlorophenol	UG/L	ND	NA	NA	NA
	2,6-Dinitrotoluene	UG/L	ND	NA	NA	NA
	3-Nitroaniline	UG/L	ND	NA	NA	NA
	3,3'-Dichlorobenzidine	UG/L	ND	NA	NA	NA
	4-Bromophenyl-phenylether	UG/L	ND	NA	NA	NA
	4-Chloro-3-methylphenol	UG/L	ND	NA	NA	NA
	4-Chloroaniline	UG/L	ND	NA	NA	NA
	4-Chlorophenyl phenyl ether	UG/L	ND	NA	NA	NA
	4-Methylphenol	UG/L	ND	NA	NA	NA
	4-Nitroaniline	UG/L	ND	NA	NA	NA
	4-Nitrophenol	UG/L	ND	NA	NA	NA
	4,6-Dinitro-2-methylphenol	UG/L	ND	NA	NA	NA
	Acenaphthene	UG/L	ND	NA	NA	NA
	Acenaphthylene	UG/L	ND	NA	NA	NA
	Anthracene	UG/L	ND	NA	NA	NA
	Benzo[a]anthracene	UG/L	ND	NA	NA	NA
	Benzo[a]pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>SEMIVOLATILES Cont.</u>					
	Benzo[b]fluoranthene	UG/L	ND	NA	NA	NA
	Benzo[g,h,i]perylene	UG/L	ND	NA	NA	NA
	Benzo[k]fluoranthene	UG/L	ND	NA	NA	NA
	bis(2-Chloroethoxy) methane	UG/L	ND	NA	NA	NA
	bis(2-Chloroethyl) ether	UG/L	ND	NA	NA	NA
	bis(2-Ethylhexyl)phthalate	UG/L	ND	NA	NA	NA
	Butyl benzyl phthalate	UG/L	ND	NA	NA	NA
	Carbazole	UG/L	ND	NA	NA	NA
	Chrysene	UG/L	ND	NA	NA	NA
	Dibenzofuran	UG/L	ND	NA	NA	NA
	Dibenz[a,h]anthracene	UG/L	ND	NA	NA	NA
	Diethylphthalate	UG/L	ND	NA	NA	NA
	Dimethyl phthalate	UG/L	ND	NA	NA	NA
	di-n-Butylphthalate	UG/L	1 J	5.8	2.6	7.7
	di-n-Octylphthalate	UG/L	ND	NA	NA	16.5
	Fluoranthene	UG/L	ND	NA	NA	NA
	Fluorene	UG/L	ND	NA	NA	NA
	Hexachlorobenzene	UG/L	ND	NA	NA	NA
	Hexachlorobutadiene	UG/L	ND	NA	NA	NA
	Hexachlorocyclopentadiene	UG/L	ND	NA	NA	NA
	Hexachloroethane	UG/L	ND	NA	NA	NA
	Indeno[1,2,3-cd]pyrene	UG/L	ND	NA	NA	NA
	Isophorone	UG/L	ND	NA	NA	NA
	Naphthalene	UG/L	ND	NA	NA	NA
	Nitrobenzene	UG/L	ND	NA	NA	NA
	N-Nitroso-di-n-propylamine	UG/L	ND	NA	NA	NA
	N-nitrosodiphenylamine	UG/L	ND	NA	NA	NA
	Pentachlorophenol	UG/L	ND	NA	NA	NA
	Phenanthrene	UG/L	ND	NA	NA	NA
	Phenol	UG/L	ND	NA	NA	NA
	Pyrene	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>VOLATILES</u>					
	Chloromethane	UG/L ND	NA	NA	NA	NA
	Bromomethane	UG/L ND	NA	NA	NA	NA
	Vinyl chloride	UG/L 8 J	5.4	1.1	6.3	6.3
	Chloroethane	UG/L ND	NA	NA	NA	NA
	Methylene chloride	UG/L ND	NA	NA	NA	NA
	Acetone	UG/L 9 J	5.3	1.8	6.6	7.1
	Carbon Disulfide	UG/L ND	NA	NA	NA	NA
	1,1-Dichloroethene	UG/L ND	NA	NA	NA	NA
	1,1-Dichloroethane	UG/L ND	NA	NA	NA	NA
	1,2-Dichloroethene(total)	UG/L 55	13.3	18.6	27.0	49.2
	Chloroform	UG/L 2 J	4.6	1.1	5.4	6.4
	1,2-Dichloroethane	UG/L ND	NA	NA	NA	NA
	2-Butanone	UG/L ND	NA	NA	NA	NA
	1,1,1-Trichloroethane	UG/L ND	NA	NA	NA	NA
	Carbon tetrachloride	UG/L ND	NA	NA	NA	NA
	Bromodichloromethane	UG/L ND	NA	NA	NA	NA
	1,2-Dichloropropane	UG/L ND	NA	NA	NA	NA
	cis-1,3-Dichloropropene	UG/L ND	NA	NA	NA	NA
	Trichloroethene	UG/L 4 J	4.9	0.4	5.1	5.2
	Dibromochloromethane	UG/L ND	NA	NA	NA	NA
	1,1,2-Trichloroethane	UG/L ND	NA	NA	NA	NA
	Benzene	UG/L ND	NA	NA	NA	NA
	trans-1,3-Dichloropropene	UG/L ND	NA	NA	NA	NA
	Bromoform	UG/L ND	NA	NA	NA	NA
	4-Methyl-2-pentanone	UG/L ND	NA	NA	NA	NA
	2-Hexanone	UG/L ND	NA	NA	NA	NA
	Tetrachloroethene	UG/L ND	NA	NA	NA	NA
	1,1,2,2-Tetrachloroethane	UG/L ND	NA	NA	NA	NA
	Toluene	UG/L 1 J	3.9	2.0	5.3	11.8
	Chlorobenzene	UG/L ND	NA	NA	NA	NA
	Ethylbenzene	UG/L 1 J	4.4	1.5	5.5	9.8
	Styrene	UG/L ND	NA	NA	NA	NA
	Xylenes (total)	UG/L 10	5.7	1.9	7.1	7.2

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>PESTICIDE/PCBS</u>					
	alpha-BHC	UG/L	ND	NA	NA	NA
	beta-BHC	UG/L	ND	NA	NA	NA
	delta-BHC	UG/L	ND	NA	NA	NA
	Lindane (gamma-BHC)	UG/L	ND	NA	NA	NA
	Heptachlor	UG/L	ND	NA	NA	NA
	Aldrin	UG/L	ND	NA	NA	NA
	Heptachlor epoxide	UG/L	ND	NA	NA	NA
	Endosulfan I	UG/L	ND	NA	NA	NA
	Dieldrin	UG/L	ND	NA	NA	NA
	4,4'-DDE	UG/L	ND	NA	NA	NA
	Endrin	UG/L	ND	NA	NA	NA
	Endosulfan II	UG/L	ND	NA	NA	NA
	4,4'-DDD	UG/L	ND	NA	NA	NA
	Endosulfan sulfate	UG/L	ND	NA	NA	NA
	4,4'-DDT	UG/L	ND	NA	NA	NA
	Methoxychlor	UG/L	ND	NA	NA	NA
	Endrin ketone	UG/L	ND	NA	NA	NA
	Endrin aldehyde	UG/L	ND	NA	NA	NA
	alpha-Chlordane	UG/L	ND	NA	NA	NA
	gamma-Chlordane	UG/L	ND	NA	NA	NA
	Toxaphene	UG/L	ND	NA	NA	NA
	Aroclor 1016	UG/L	ND	NA	NA	NA
	Aroclor 1221	UG/L	ND	NA	NA	NA
	Aroclor 1232	UG/L	ND	NA	NA	NA
	Aroclor 1242	UG/L	ND	NA	NA	NA
	Aroclor 1248	UG/L	ND	NA	NA	NA
	Aroclor 1254	UG/L	ND	NA	NA	NA
	Aroclor 1260	UG/L	ND	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: Laboratory Sample ID: Date Sampled:		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>					
	<u>CHEMICAL SURETY</u>					
	Acetophenone	UG/L	ND	NA	NA	NA
	Chloroacetophenone	UG/L	ND	NA	NA	NA
	Hydroxyacetophenone	UG/L	ND	NA	NA	NA
	Bis(2'-chloroethyl)disulfide	UG/L	ND	NA	NA	NA
	Bis(2'-chloroethyl)trisulfide	UG/L	ND	NA	NA	NA
	1,4-Dithiane	UG/L	ND	NA	NA	NA
	1,4-Oxathiane	UG/L	ND	NA	NA	NA
	<u>THIODIGLYCOL</u>					
	Thiodiglycol	UG/L	ND	NA	NA	NA

**APPENDIX P.12**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SURFACE WATER INORGANICS**

---



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:	69-OS-SW01	69-OS-SW02	69-OS-SW03	69-DA-SW01	69-DA-SW02	69-DA-SW03
Laboratory Sample ID:	9401042-01A	9401040-02A	9401040-01A	9401053-01A	9401053-02A	9401053-04A
Date Sampled:	01/08/94	01/07/94	01/07/94	01/08/94	01/08/94	01/09/94
Aluminum	972.0	2210.0	487.0	4720.0	29200.0	9780.0
Antimony	3.95 U	3.95 U	3.95 U	39.5 U	39.5 U	39.5 U
Arsenic	1.45 U	4.10	1.45 U	1.45 UJ	1.45 U	32.8
Barium	45.1	66.6	54.1	152.0	373.0	245.0
Beryllium	0.65 U	0.65 U	0.65 U	0.65 U	6.00	1.60
Cadmium	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U
Calcium	5770.0	3080.0	5870.0	73000.0	41300.0	21300.0
Chromium	3.60 U	3.60 U	3.60 U	3.60 U	23.8	3.60 U
Cobalt	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Copper	8.1 U	22.8	8.1 U	8.1 U	26.3	35.9
Iron	1910.0	3820.0	1090.0	2770.0	13500.0	38400.0
Lead	0.50 U	40.1	3.50	10.3	85.8	52.4
Magnesium	1460.0	885.0	2400.0	143000.0	38100.0	3840.0
Manganese	339.0	73.4	156.0	147.0	421.0	129.0
Mercury	0.100 U	0.100 U	0.100 U	0.100 U	0.430	0.100 U
Nickel	6.8 U	6.8 U	6.8 U	6.8 U	17.8	6.8 U
Potassium	365.0	365.0	150.0 U	37600.0	11200.0	1980.0
Selenium	1.25 U	1.25 U	1.25 U	6.3 U	1.25 U	1.25 U
Silver	0.200 UJ	0.200 UJ	0.200 UJ	0.910 J	0.740 J	0.200 UJ
Sodium	6440.0	4900.0	6820.0	1460000.0	228000.0	6530.0
Thallium	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U	2.30 U
Vanadium	8.3 U	8.3 U	8.3 U	8.3 U	24.0	23.3
Zinc	4370.0	1970.0	1560.0	112.0	96.0	1400.0

STATISTICAL SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SURFACE WATER  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
TAL METALS

Client Sample ID: 69-DA-SW04  
Laboratory Sample ID: 9401053-03A  
Date Sampled: 01/09/94

---

Aluminum	801.0
Antimony	3.95 U
Arsenic	1.45 UJ
Barium	55.5
Beryllium	0.65 U
Cadmium	1.20 U
Calcium	28400.0
Chromium	3.60 U
Cobalt	9.7 U
Copper	8.1 U
Iron	8370.0
Lead	3.10
Magnesium	4670.0
Manganese	157.0
Mercury	0.100 U
Nickel	6.8 U
Potassium	580.0
Selenium	1.25 UJ
Silver	2.30 J
Sodium	8260.0
Thallium	2.30 U
Vanadium	8.3 U
Zinc	296.0

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SURFACE WATER  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID: Laboratory Sample ID: Date Sampled:	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE INTERVAL	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Aluminum	29200	6881.4	10374.6	14500.4	186645.1
Antimony	ND	NA	NA	NA	NA
Arsenic	32.8	6.3	11.7	14.9	44.3
Barium	373	141.6	125.4	233.7	474.2
Beryllium	6	1.6	2.0	3.0	4.8
Cadmium	ND	NA	NA	NA	NA
Calcium	73000	25531.4	25196.6	44035.4	257877.0
Chromium	23.8	6.5	7.6	12.1	15.3
Cobalt	ND	NA	NA	NA	NA
Copper	35.9	16.8	11.5	25.2	38.3
Iron	38400	9980.0	13271.3	19726.2	101052.5
Lead	85.8	28.0	32.6	51.9	9446.0
Magnesium	143000	27765.0	52519.2	66334.3	5153562.0
Manganese	421	203.2	126.3	296.0	396.8
Mercury	0.43	0.15	0.12	0.24	0.26
Nickel	17.8	8.4	4.2	11.4	11.7
Potassium	37600	7462.9	13867.7	17647.1	10707775.9
Selenium	ND	NA	NA	NA	NA
Silver	2.3 J	0.7	0.8	1.2	4.3
Sodium	1460000	245850.0	541712.0	643675.1	656072425.3
Thallium	ND	NA	NA	NA	NA
Vanadium	24	12.7	7.5	18.2	22.3
Zinc	4370	1400.6	1513.8	2512.3	80617.7

**APPENDIX P.13**  
**SITE 69 EVERETT CREEK SURFACE WATER ORGANICS**

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	9/16/92	08/20/92	08/20/92
Lab Id:	00517-22	00424-03	00424-06

Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.025 UJ	0.025 UJ	0.025 U
BETA-BHC	UG/L	0.025 UJ	0.025 UJ	0.025 U
DELTA-BHC	UG/L	0.025 UJ	0.025 UJ	0.025 U
GAMMA-BHC(LINDANE)	UG/L	0.025 UJ	0.025 UJ	0.025 U
HEPTACHLOR	UG/L	0.025 UJ	0.025 UJ	0.025 U
ALDRIN	UG/L	0.025 UJ	0.025 UJ	0.025 U
HEPTACHLOR EPOXIDE	UG/L	0.025 UJ	0.025 UJ	0.025 U
ENDOSULFAN I	UG/L	0.025 UJ	0.025 UJ	0.025 U
DIELDRIN	UG/L	0.05 UJ	0.05 UJ	0.05 U
4,4'-DDE	UG/L	0.05 UJ	0.05 UJ	0.05 U
ENDRIN	UG/L	0.05 UJ	0.05 UJ	0.05 U
ENDOSULFAN II	UG/L	0.05 UJ	0.05 UJ	0.05 U
4,4'-DDD	UG/L	0.05 UJ	0.05 UJ	0.05 U
ENDOSULFAN SULFATE	UG/L	0.05 UJ	0.05 UJ	0.05 U
4,4'-DDT	UG/L	0.05 UJ	0.05 UJ	0.05 U
METHOXYCHLOR	UG/L	0.25 UJ	0.25 UJ	0.25 U
ENDRIN KETONE	UG/L	0.05 UJ	0.05 UJ	0.05 U
ENDRIN ALDEHYDE	UG/L	0.05 UJ	0.05 UJ	0.05 U
ALPHA CHLORDANE	UG/L	0.025 UJ	0.025 UJ	0.025 U
GAMMA CHLORDANE	UG/L	0.025 UJ	0.025 UJ	0.025 U
TOXAPHENE	UG/L	2.5 UJ	2.5 UJ	2.5 U
PCB-1016	UG/L	0.5 UJ	0.5 UJ	0.5 U
PCB-1221	UG/L	1 UJ	1 UJ	1 U
PCB-1232	UG/L	0.5 UJ	0.5 UJ	0.5 U
PCB-1242	UG/L	0.5 UJ	0.5 UJ	0.5 U
PCB-1248	UG/L	0.5 UJ	0.5 UJ	0.5 U
PCB-1254	UG/L	0.5 UJ	0.5 UJ	0.5 U
PCB-1260	UG/L	0.5 UJ	0.5 UJ	0.5 U
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	5 U	5 U	5 U
BROMOMETHANE	UG/L	5 U	5 U	5 U
VINYL CHLORIDE	UG/L	5 U	5 U	5 U
CHLOROETHANE	UG/L	5 U	5 U	5 U
METHYLENE CHLORIDE	UG/L	5 U	5 U	5 U
ACETONE	UG/L	5 UJ	5 U	5 U
CARBON DISULFIDE	UG/L	5 U	5 U	5 U
1,1-DICHLOROETHENE	UG/L	5 U	5 UJ	5 UJ
1,1-DICHLOROETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHENE	UG/L	5 U	5 U	5 U
CHLOROFORM	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHANE	UG/L	5 U	5 U	5 U
2-BUTANONE	UG/L	5 U	5 U	5 U

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92
	Lab Id:	00517-22	00424-03	00424-06
Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
CARBON TETRACHLORIDE	UG/L	5 U	5 U	5 U
BROMODICHLOROMETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROPROPANE	UG/L	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
TRICHLOROETHENE	UG/L	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	UG/L	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
BENZENE	UG/L	5 U	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
BROMOFORM	UG/L	5 U	5 U	5 U
4-METHYL-2-PENTANONE	UG/L	5 U	5 U	5 U
2-HEXANONE	UG/L	5 U	5 U	5 U
TETRACHLOROETHENE	UG/L	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	UG/L	5 U	5 U	5 U
TOLUENE	UG/L	5 U	5 U	5 U
CHLOROBENZENE	UG/L	5 U	5 U	5 U
ETHYLBENZENE	UG/L	5 U	5 U	5 U
STYRENE	UG/L	5 U	5 U	5 U
TOTAL XYLENES	UG/L	5 U	5 U	5 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHYL) ETHER	UG/L	5 U	5 U	5 U
2-CHLOROPHENOL	UG/L	5 U	5 U	5 U
1,3-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,4-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,2-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
2-METHYLPHENOL	UG/L	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	5 U	5 U	5 U
4-METHYLPHENOL	UG/L	5 U	5 U	5 U
N-NITROSODI-N-PROPYLAMINE	UG/L	5 U	5 U	5 U
HEXACHLOROETHANE	UG/L	5 U	5 U	5 U
NITROBENZENE	UG/L	5 U	5 U	5 U
ISOPHORONE	UG/L	5 U	5 U	5 U
2-NITROPHENOL	UG/L	5 U	5 U	5 U
2,4-DIMETHYLPHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	5 U	5 U	5 U
2,4-DICHLOROPHENOL	UG/L	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE	UG/L	5 U	5 U	5 U
NAPHTHALENE	UG/L	5 U	5 U	5 U
4-CHLORANILINE	UG/L	5 U	5 U	5 U
HEXACHLOROBUTADIENE	UG/L	5 U	5 U	5 U

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	9/16/92	08/20/92	08/20/92
Lab Id:	00517-22	00424-03	00424-06
Parameter	Units		
<u>SEMIVOLATILES (Continued)</u>			
4-CHLORO-3-METHYLPHENOL	UG/L	5 U	5 U
2-METHYLNAPHTHALENE	UG/L	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	UG/L	5 U	5 U
2,4,6-TRICHLOROPHENOL	UG/L	5 U	5 U
2,4,5-TRICHLOROPHENOL	UG/L	12.5 U	12.5 U
2-CHLORONAPHTHALENE	UG/L	5 U	5 U
2-NITROANILINE	UG/L	12.5 U	12.5 U
DIMETHYL PHTHALATE	UG/L	5 U	5 U
ACENAPHTHYLENE	UG/L	5 U	5 U
2,6-DINITROTOLUENE	UG/L	5 U	5 U
3-NITROANILINE	UG/L	12.5 U	12.5 U
ACENAPHTHENE	UG/L	5 U	5 U
2,4-DINITROPHENOL	UG/L	12.5 U	12.5 U
4-NITROPHENOL	UG/L	12.5 U	12.5 U
DIBENZOFURAN	UG/L	5 U	5 U
2,4-DINITROTOLUENE	UG/L	5 U	5 U
DIETHYL PHTHALATE	UG/L	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	5 U	5 U
FLUORENE	UG/L	5 U	5 U
4-NITROANILINE	UG/L	12.5 U	12.5 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	12.5 U	12.5 U
N-NITRISODIPHENYLAMINE	UG/L	5 U	5 U
4-BROMOPHENYL PHENYL ETHER	UG/L	5 U	5 U
HEXACHLOROBENZENE	UG/L	5 U	5 U
PENTACHLOROPHENOL	UG/L	12.5 U	12.5 U
PHENANTHRENE	UG/L	5 U	5 U
ANTHRACENE	UG/L	5 U	5 U
DI-N-BUTYL PHTHALATE	UG/L	5 U	5 U
FLUORANTHENE	UG/L	5 U	5 U
CARBAZOLE	UG/L	5 U	5 U
PYRENE	UG/L	5 U	5 U
BUTYL BENZYL PHTHALATE	UG/L	5 U	5 U
3,3-DICHLOROBENZIDINE	UG/L	5 U	5 U
BENZO(A)ANTHRACENE	UG/L	5 U	5 U
CHRYSENE	UG/L	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	5 U	5 U
DI-N-OCTYL PHTHALATE	UG/L	5 U	5 U
BENZO(B)FLUORANTHENE	UG/L	5 U	5 U
BENZO(K)FLUORANTHENE	UG/L	5 U	5 U
BENZO(A)PYRENE	UG/L	5 U	5 U
INDENO(1,2,3-CD) PYRENE	UG/L	5 U	5 U
DIBENZ(AH)ANTHRACENE	UG/L	5 U	5 U
BENZO(G,H,I)PERYLENE	UG/L	5 U	5 U

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>PESTICIDE/PCBs</u>					
ALPHA-BHC	UG/L	ND	NA	NA	NA
BETA-BHC	UG/L	ND	NA	NA	NA
DELTA-BHC	UG/L	ND	NA	NA	NA
GAMMA-BHC(LINDANE)	UG/L	ND	NA	NA	NA
HEPTACHLOR	UG/L	ND	NA	NA	NA
ALDRIN	UG/L	ND	NA	NA	NA
HEPTACHLOR EPOXIDE	UG/L	ND	NA	NA	NA
ENDOSULFAN I	UG/L	ND	NA	NA	NA
DIELDRIN	UG/L	ND	NA	NA	NA
4,4'-DDE	UG/L	ND	NA	NA	NA
ENDRIN	UG/L	ND	NA	NA	NA
ENDOSULFAN II	UG/L	ND	NA	NA	NA
4,4'-DDD	UG/L	ND	NA	NA	NA
ENDOSULFAN SULFATE	UG/L	ND	NA	NA	NA
4,4'-DDT	UG/L	ND	NA	NA	NA
METHOXYCHLOR	UG/L	ND	NA	NA	NA
ENDRIN KETONE	UG/L	ND	NA	NA	NA
ENDRIN ALDEHYDE	UG/L	ND	NA	NA	NA
ALPHA CHLORDANE	UG/L	ND	NA	NA	NA
GAMMA CHLORDANE	UG/L	ND	NA	NA	NA
TOXAPHENE	UG/L	ND	NA	NA	NA
PCB-1016	UG/L	ND	NA	NA	NA
PCB-1221	UG/L	ND	NA	NA	NA
PCB-1232	UG/L	ND	NA	NA	NA
PCB-1242	UG/L	ND	NA	NA	NA
PCB-1248	UG/L	ND	NA	NA	NA
PCB-1254	UG/L	ND	NA	NA	NA
PCB-1260	UG/L	ND	NA	NA	NA
<u>VOLATILES</u>					
CHLOROMETHANE	UG/L	ND	NA	NA	NA
BROMOMETHANE	UG/L	ND	NA	NA	NA
VINYL CHLORIDE	UG/L	ND	NA	NA	NA
CHLOROETHANE	UG/L	ND	NA	NA	NA
METHYLENE CHLORIDE	UG/L	ND	NA	NA	NA
ACETONE	UG/L	ND	NA	NA	NA
CARBON DISULFIDE	UG/L	ND	NA	NA	NA
1,1-DICHLOROETHENE	UG/L	ND	NA	NA	NA
1,1-DICHLOROETHANE	UG/L	ND	NA	NA	NA
1,2-DICHLOROETHENE	UG/L	ND	NA	NA	NA
CHLOROFORM	UG/L	ND	NA	NA	NA
1,2-DICHLOROETHANE	UG/L	ND	NA	NA	NA
2-BUTANONE	UG/L	ND	NA	NA	NA



SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>VOLATILES (Continued)</u>					
1,1,1-TRICHLOROETHANE	UG/L	ND	NA	NA	NA
CARBON TETRACHLORIDE	UG/L	ND	NA	NA	NA
BROMODICHLOROMETHANE	UG/L	ND	NA	NA	NA
1,2-DICHLOROPROPANE	UG/L	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	UG/L	ND	NA	NA	NA
TRICHLOROETHENE	UG/L	ND	NA	NA	NA
DIBROMOCHLOROMETHANE	UG/L	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE	UG/L	ND	NA	NA	NA
BENZENE	UG/L	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	NA	NA	NA
BROMOFORM	UG/L	ND	NA	NA	NA
4-METHYL-2-PENTANONE	UG/L	ND	NA	NA	NA
2-HEXANONE	UG/L	ND	NA	NA	NA
TETRACHLOROETHENE	UG/L	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	NA	NA	NA
TOLUENE	UG/L	ND	NA	NA	NA
CHLOROBENZENE	UG/L	ND	NA	NA	NA
ETHYLBENZENE	UG/L	ND	NA	NA	NA
STYRENE	UG/L	ND	NA	NA	NA
TOTAL XYLENES	UG/L	ND	NA	NA	NA
<u>SEMIVOLATILES</u>					
PHENOL	UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER	UG/L	ND	NA	NA	NA
2-CHLOROPHENOL	UG/L	ND	NA	NA	NA
1,3-DICHLOROBENZENE	UG/L	ND	NA	NA	NA
1,4-DICHLOROBENZENE	UG/L	ND	NA	NA	NA
1,2-DICHLOROBENZENE	UG/L	ND	NA	NA	NA
2-METHYLPHENOL	UG/L	ND	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	ND	NA	NA	NA
4-METHYLPHENOL	UG/L	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE	UG/L	ND	NA	NA	NA
HEXACHLOROETHANE	UG/L	ND	NA	NA	NA
NITROBENZENE	UG/L	ND	NA	NA	NA
ISOPHORONE	UG/L	ND	NA	NA	NA
2-NITROPHENOL	UG/L	ND	NA	NA	NA
2,4-DIMETHYLPHENOL	UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE	UG/L	ND	NA	NA	NA
2,4-DICHLOROPHENOL	UG/L	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE	UG/L	ND	NA	NA	NA
NAPHTHALENE	UG/L	ND	NA	NA	NA
4-CHLORANILINE	UG/L	ND	NA	NA	NA
HEXACHLOROBUTADIENE	UG/L	ND	NA	NA	NA

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>SEMIVOLATILES (Continued)</u>					
4-CHLORO-3-METHYLPHENOL	UG/L	ND	NA	NA	NA
2-METHYLNAPHTHALENE	UG/L	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	UG/L	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL	UG/L	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL	UG/L	ND	NA	NA	NA
2-CHLORONAPHTHALENE	UG/L	ND	NA	NA	NA
2-NITROANILINE	UG/L	ND	NA	NA	NA
DIMETHYL PHTHALATE	UG/L	ND	NA	NA	NA
ACENAPHTHYLENE	UG/L	ND	NA	NA	NA
2,6-DINITROTOLUENE	UG/L	ND	NA	NA	NA
3-NITROANILINE	UG/L	ND	NA	NA	NA
ACENAPHTHENE	UG/L	ND	NA	NA	NA
2,4-DINITROPHENOL	UG/L	ND	NA	NA	NA
4-NITROPHENOL	UG/L	ND	NA	NA	NA
DIBENZOFURAN	UG/L	ND	NA	NA	NA
2,4-DINITROTOLUENE	UG/L	ND	NA	NA	NA
DIETHYL PHTHALATE	UG/L	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	UG/L	ND	NA	NA	NA
FLUORENE	UG/L	ND	NA	NA	NA
4-NITROANILINE	UG/L	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	UG/L	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE	UG/L	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	UG/L	ND	NA	NA	NA
HEXACHLOROBENZENE	UG/L	ND	NA	NA	NA
PENTACHLOROPHENOL	UG/L	ND	NA	NA	NA
PHENANTHRENE	UG/L	ND	NA	NA	NA
ANTHRACENE	UG/L	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE	UG/L	ND	NA	NA	NA
FLUORANTHENE	UG/L	ND	NA	NA	NA
CARBAZOLE	UG/L	ND	NA	NA	NA
PYRENE	UG/L	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE	UG/L	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE	UG/L	ND	NA	NA	NA
BENZO(A)ANTHRACENE	UG/L	ND	NA	NA	NA
CHRYSENE	UG/L	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	ND	NA	NA	NA
DI-N-OCTYL PHTHALATE	UG/L	ND	NA	NA	NA
BENZO(B)FLUORANTHENE	UG/L	ND	NA	NA	NA
BENZO(K)FLUORANTHENE	UG/L	ND	NA	NA	NA
BENZO(A)PYRENE	UG/L	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE	UG/L	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	UG/L	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE	UG/L	ND	NA	NA	NA

**APPENDIX P.14**  
**SITE 69 EVERETT CREEK SURFACE WATER INORGANICS**

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC1-SW-06	69-EC3-SW-06	69-EC4-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92
	Lab Id:	00517-22	00424-03	00424-06
Parameter	Units			
ALUMINUM	UG/L	55 U	501	445
ANTIMONY	UG/L	7 U	7 U	7 U
ARSENIC	UG/L	1.5 UJ	1.5 U	1.5 U
BARIUM	UG/L	22.2 JB	11.3 BJ	10.4 BJ
BERYLLIUM	UG/L	0.15 UJ	0.5 U	0.5 U
CADMIUM	UG/L	0.95 U	1 U	1 U
CALCIUM	UG/L	85200	26400	29300
CHROMIUM	UG/L	2.6 U	2 U	2 U
COBALT	UG/L	1 U	1 U	1 U
COPPER	UG/L	2.6 JB	1.1 U	1.6 U
CYANIDE	UG/L	5 U	5 U	5 U
IRON	UG/L	667	557	490
LEAD	UG/L	0.5 UJ	2.3 BJ	1.4 B
MAGNESIUM	UG/L	229000	73800	80200
MANGANESE	UG/L	32.5	17.3 J	14.3 BJ
MERCURY	UG/L	0.035 U	0.1 U	0.1 U
NICKEL	UG/L	3.95 UJ	4 U	4 U
POTASSIUM	UG/L	88700	22600	26200
SELENIUM	UG/L	2.5 U	2.5 U	2.5 U
SILVER	UG/L	4.3 UJ	4.1 BJ	3.2 BJ
SODIUM	UG/L	2130000	801000	727000
THALLIUM	UG/L	5 UJ	1 UJ	1 UJ
VANADIUM	UG/L	0.9 U	1 U	1 U
ZINC	UG/L	2.6 U	4 U	4.8 U

SITE 69 EVERETT CREEK SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
ALUMINUM	UG/L	501	333.67	242.95	307527.56
ANTIMONY	UG/L	ND	NA	NA	NA
ARSENIC	UG/L	ND	NA	NA	NA
BARIUM	UG/L	22.2 JB	14.63	6.57	37.67
BERYLLIUM	UG/L	ND	NA	NA	NA
CADMIUM	UG/L	ND	NA	NA	NA
CALCIUM	UG/L	85200	46966.67	33142.77	291211.46
CHROMIUM	UG/L	ND	NA	NA	NA
COBALT	UG/L	ND	NA	NA	NA
COPPER	UG/L	2.6 JB	1.77	0.76	4.72
CYANIDE	UG/L	ND	NA	NA	NA
IRON	UG/L	667	571.33	89.37	770.00
LEAD	UG/L	2.3 BJ	1.40	0.90	23.65
MAGNESIUM	UG/L	229000	127666.67	87815.56	755055.95
MANGANESE	UG/L	32.5	21.37	9.76	56.75
MERCURY	UG/L	ND	NA	NA	NA
NICKEL	UG/L	ND	NA	NA	NA
POTASSIUM	UG/L	88700	45833.33	37167.23	675227.13
SELENIUM	UG/L	ND	NA	NA	NA
SILVER	UG/L	4.1 BJ	3.87	0.59	5.25
SODIUM	UG/L	2130000	1219333.33	789527.92	6528933.95
THALLIUM	UG/L	ND	NA	NA	NA
VANADIUM	UG/L	ND	NA	NA	NA
ZINC	UG/L	ND	NA	NA	NA

**APPENDIX P.15**  
**SITE 69 NEW RIVER SURFACE WATER ORGANICS**

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO--0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
	Depth:	N/A	N/A	N/A
	Date Sampled:	08/20/92	08/20/92	08/20/92
	Lab Id:	00424-09	00424-12	00424-15
Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.025 U	0.025 U	0.025 U
BETA-BHC	UG/L	0.025 U	0.025 U	0.025 U
DELTA-BHC	UG/L	0.025 U	0.025 U	0.025 U
GAMMA-BHC(LINDANE)	UG/L	0.025 U	0.025 U	0.025 U
HEPTACHLOR	UG/L	0.025 U	0.025 U	0.025 U
ALDRIN	UG/L	0.025 U	0.025 U	0.025 U
HEPTACHLOR EPOXIDE	UG/L	0.025 U	0.025 U	0.025 U
ENDOSULFAN I	UG/L	0.025 U	0.025 U	0.025 U
DIELDRIN	UG/L	0.05 U	0.05 U	0.05 U
4,4'-DDE	UG/L	0.05 U	0.05 U	0.05 U
ENDRIN	UG/L	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	UG/L	0.05 U	0.05 U	0.05 U
4,4'-DDD	UG/L	0.05 U	0.05 U	0.05 U
ENDOSULFAN SULFATE	UG/L	0.05 U	0.05 U	0.05 U
4,4'-DDT	UG/L	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	UG/L	0.25 U	0.25 U	0.25 U
ENDRIN KETONE	UG/L	0.05 U	0.05 U	0.05 U
ENDRIN ALDEHYDE	UG/L	0.05 U	0.05 U	0.05 U
ALPHA CHLORDANE	UG/L	0.025 U	0.025 U	0.025 U
GAMMA CHLORDANE	UG/L	0.025 U	0.025 U	0.025 U
TOXAPHENE	UG/L	2.5 U	2.5 U	2.5 U
PCB-1016	UG/L	0.5 U	0.5 U	0.5 U
PCB-1221	UG/L	1 U	1 U	1 U
PCB-1232	UG/L	0.5 U	0.5 U	0.5 U
PCB-1242	UG/L	0.5 U	0.5 U	0.5 U
PCB-1248	UG/L	0.5 U	0.5 U	0.5 U
PCB-1254	UG/L	0.5 U	0.5 U	0.5 U
PCB-1260	UG/L	0.5 U	0.5 U	0.5 U
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	5 U	5 U	5 U
BROMOMETHANE	UG/L	5 U	5 U	5 U
VINYL CHLORIDE	UG/L	5 U	5 U	5 U
CHLOROETHANE	UG/L	5 U	5 U	5 U
METHYLENE CHLORIDE	UG/L	5 U	5 U	5 U
ACETONE	UG/L	5 U	5 U	5 U
CARBON DISULFIDE	UG/L	5 U	5 U	5 U
1,1-DICHLOROETHENE	UG/L	5 U	5 U	5 U
1,1-DICHLOROETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHENE	UG/L	5 U	5 U	5 U
CHLOROFORM	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHANE	UG/L	5 U	5 U	5 U
2-BUTANONE	UG/L	5 U	5 U	5 U

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	08/20/92	08/20/92	08/20/92
Lab Id:	00424-09	00424-12	00424-15

Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
CARBON TETRACHLORIDE	UG/L	5 U	5 U	5 U
BROMODICHLOROMETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROPROPANE	UG/L	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
TRICHLOROETHENE	UG/L	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	UG/L	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
BENZENE	UG/L	5 U	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
BROMOFORM	UG/L	5 U	5 U	5 U
4-METHYL-2-PENTANONE	UG/L	5 U	5 U	5 U
2-HEXANONE	UG/L	5 U	5 U	5 U
TETRACHLOROETHENE	UG/L	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	UG/L	5 U	5 U	5 U
TOLUENE	UG/L	5 U	5 U	5 U
CHLOROBENZENE	UG/L	5 U	5 U	5 U
ETHYLBENZENE	UG/L	5 U	5 U	5 U
STYRENE	UG/L	5 U	5 U	5 U
TOTAL XYLENES	UG/L	5 U	5 U	5 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHYL) ETHER	UG/L	5 U	5 U	5 U
2-CHLOROPHENOL	UG/L	5 U	5 U	5 U
1,3-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,4-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,2-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
2-METHYLPHENOL	UG/L	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	5 U	5 U	5 U
4-METHYLPHENOL	UG/L	5 U	5 U	5 U
N-NITROSODI-N-PROPYLAMINE	UG/L	5 U	5 U	5 U
HEXACHLOROETHANE	UG/L	5 U	5 U	5 U
NITROBENZENE	UG/L	5 U	5 U	5 U
ISOPHORONE	UG/L	5 U	5 U	5 U
2-NITROPHENOL	UG/L	5 U	5 U	5 U
2,4-DIMETHYLPHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	5 U	5 U	5 U
2,4-DICHLOROPHENOL	UG/L	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE	UG/L	5 U	5 U	5 U
NAPHTHALENE	UG/L	5 U	5 U	5 U
4-CHLORANILINE	UG/L	5 U	5 U	5 U
HEXACHLOROBUTADIENE	UG/L	5 U	5 U	5 U



SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	08/20/92	08/20/92	08/20/92
Lab Id:	00424-09	00424-12	00424-15
Parameter	Units		
<u>SEMIVOLATILES (Continued)</u>			
4-CHLORO-3-METHYLPHENOL	UG/L	5 U	5 U
2-METHYLNAPHTHALENE	UG/L	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	UG/L	5 U	5 U
2,4,6-TRICHLOROPHENOL	UG/L	5 U	5 U
2,4,5-TRICHLOROPHENOL	UG/L	12.5 U	12.5 U
2-CHLORONAPHTHALENE	UG/L	5 U	5 U
2-NITROANILINE	UG/L	12.5 U	12.5 U
DIMETHYL PHTHALATE	UG/L	5 U	5 U
ACENAPHTHYLENE	UG/L	5 U	5 U
2,6-DINITROTOLUENE	UG/L	5 U	5 U
3-NITROANILINE	UG/L	12.5 U	12.5 U
ACENAPHTHENE	UG/L	5 U	5 U
2,4-DINITROPHENOL	UG/L	12.5 U	12.5 U
4-NITROPHENOL	UG/L	12.5 U	12.5 U
DIBENZOFURAN	UG/L	5 U	5 U
2,4-DINITROTOLUENE	UG/L	5 U	5 U
DIETHYL PHTHALATE	UG/L	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	5 U	5 U
FLUORENE	UG/L	5 U	5 U
4-NITROANILINE	UG/L	12.5 U	12.5 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	12.5 U	12.5 U
N-NITRISODIPHENYLAMINE	UG/L	5 U	5 U
4-BROMOPHENYL PHENYL ETHER	UG/L	5 U	5 U
HEXACHLOROBENZENE	UG/L	5 U	5 U
PENTACHLOROPHENOL	UG/L	12.5 UJ	12.5 UJ
PHENANTHRENE	UG/L	5 U	5 U
ANTHRACENE	UG/L	5 U	5 U
DI-N-BUTYL PHTHALATE	UG/L	5 U	5 U
FLUORANTHENE	UG/L	5 U	5 U
CARBAZOLE	UG/L	5 U	5 U
PYRENE	UG/L	5 U	5 U
BUTYL BENZYL PHTHALATE	UG/L	5 U	5 U
3,3-DICHLOROBENZIDINE	UG/L	5 U	5 U
BENZO(A)ANTHRACENE	UG/L	5 U	5 U
CHRYSENE	UG/L	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	5 U	5 U
DI-N-OCTYL PHTHALATE	UG/L	5 U	5 U
BENZO(B)FLUORANTHENE	UG/L	5 U	5 U
BENZO(K)FLUORANTHENE	UG/L	5 U	5 U
BENZO(A)PYRENE	UG/L	5 U	5 U
INDENO(1,2,3-CD) PYRENE	UG/L	5 U	5 U
DIBENZ(AH)ANTHRACENE	UG/L	5 U	5 U
BENZO(G,H,I)PERYLENE	UG/L	5 U	5 U

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC		UG/L	ND	NA	NA	NA
BETA-BHC		UG/L	ND	NA	NA	NA
DELTA-BHC		UG/L	ND	NA	NA	NA
GAMMA-BHC(LINDANE)		UG/L	ND	NA	NA	NA
HEPTACHLOR		UG/L	ND	NA	NA	NA
ALDRIN		UG/L	ND	NA	NA	NA
HEPTACHLOR EPOXIDE		UG/L	ND	NA	NA	NA
ENDOSULFAN I		UG/L	ND	NA	NA	NA
DIELDRIN		UG/L	ND	NA	NA	NA
4,4'-DDE		UG/L	ND	NA	NA	NA
ENDRIN		UG/L	ND	NA	NA	NA
ENDOSULFAN II		UG/L	ND	NA	NA	NA
4,4'-DDD		UG/L	ND	NA	NA	NA
ENDOSULFAN SULFATE		UG/L	ND	NA	NA	NA
4,4'-DDT		UG/L	ND	NA	NA	NA
METHOXYCHLOR		UG/L	ND	NA	NA	NA
ENDRIN KETONE		UG/L	ND	NA	NA	NA
ENDRIN ALDEHYDE		UG/L	ND	NA	NA	NA
ALPHA CHLORDANE		UG/L	ND	NA	NA	NA
GAMMA CHLORDANE		UG/L	ND	NA	NA	NA
TOXAPHENE		UG/L	ND	NA	NA	NA
PCB-1016		UG/L	ND	NA	NA	NA
PCB-1221		UG/L	ND	NA	NA	NA
PCB-1232		UG/L	ND	NA	NA	NA
PCB-1242		UG/L	ND	NA	NA	NA
PCB-1248		UG/L	ND	NA	NA	NA
PCB-1254		UG/L	ND	NA	NA	NA
PCB-1260		UG/L	ND	NA	NA	NA
<u>VOLATILES</u>						
CHLOROMETHANE		UG/L	ND	NA	NA	NA
BROMOMETHANE		UG/L	ND	NA	NA	NA
VINYL CHLORIDE		UG/L	ND	NA	NA	NA
CHLOROETHANE		UG/L	ND	NA	NA	NA
METHYLENE CHLORIDE		UG/L	ND	NA	NA	NA
ACETONE		UG/L	ND	NA	NA	NA
CARBON DISULFIDE		UG/L	ND	NA	NA	NA
1,1-DICHLOROETHENE		UG/L	ND	NA	NA	NA
1,1-DICHLOROETHANE		UG/L	ND	NA	NA	NA
1,2-DICHLOROETHENE		UG/L	ND	NA	NA	NA
CHLOROFORM		UG/L	ND	NA	NA	NA
1,2-DICHLOROETHANE		UG/L	ND	NA	NA	NA
2-BUTANONE		UG/L	ND	NA	NA	NA

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>VOLATILES (Continued)</u>						
1,1,1-TRICHLOROETHANE		UG/L	ND	NA	NA	NA
CARBON TETRACHLORIDE		UG/L	ND	NA	NA	NA
BROMODICHLOROMETHANE		UG/L	ND	NA	NA	NA
1,2-DICHLOROPROPANE		UG/L	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE		UG/L	ND	NA	NA	NA
TRICHLOROETHENE		UG/L	ND	NA	NA	NA
DIBROMOCHLOROMETHANE		UG/L	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE		UG/L	ND	NA	NA	NA
BENZENE		UG/L	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE		UG/L	ND	NA	NA	NA
BROMOFORM		UG/L	ND	NA	NA	NA
4-METHYL-2-PENTANONE		UG/L	ND	NA	NA	NA
2-HEXANONE		UG/L	ND	NA	NA	NA
TETRACHLOROETHENE		UG/L	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE		UG/L	ND	NA	NA	NA
TOLUENE		UG/L	ND	NA	NA	NA
CHLOROBENZENE		UG/L	ND	NA	NA	NA
ETHYLBENZENE		UG/L	ND	NA	NA	NA
STYRENE		UG/L	ND	NA	NA	NA
TOTAL XYLENES		UG/L	ND	NA	NA	NA
<u>SEMIVOLATILES</u>						
PHENOL		UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER		UG/L	ND	NA	NA	NA
2-CHLOROPHENOL		UG/L	ND	NA	NA	NA
1,3-DICHLOROBENZENE		UG/L	ND	NA	NA	NA
1,4-DICHLOROBENZENE		UG/L	ND	NA	NA	NA
1,2-DICHLOROBENZENE		UG/L	ND	NA	NA	NA
2-METHYLPHENOL		UG/L	ND	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)		UG/L	ND	NA	NA	NA
4-METHYLPHENOL		UG/L	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE		UG/L	ND	NA	NA	NA
HEXACHLOROETHANE		UG/L	ND	NA	NA	NA
NITROBENZENE		UG/L	ND	NA	NA	NA
ISOPHORONE		UG/L	ND	NA	NA	NA
2-NITROPHENOL		UG/L	ND	NA	NA	NA
2,4-DIMETHYLPHENOL		UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE		UG/L	ND	NA	NA	NA
2,4-DICHLOROPHENOL		UG/L	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE		UG/L	ND	NA	NA	NA
NAPHTHALENE		UG/L	ND	NA	NA	NA
4-CHLORANILINE		UG/L	ND	NA	NA	NA
HEXACHLOROBUTADIENE		UG/L	ND	NA	NA	NA

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO--0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES (Continued)</u>						
4-CHLORO-3-METHYLPHENOL		UG/L	ND	NA	NA	NA
2-METHYLNAPHTHALENE		UG/L	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE		UG/L	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL		UG/L	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL		UG/L	ND	NA	NA	NA
2-CHLORONAPHTHALENE		UG/L	ND	NA	NA	NA
2-NITROANILINE		UG/L	ND	NA	NA	NA
DIMETHYL PHTHALATE		UG/L	ND	NA	NA	NA
ACENAPHTHYLENE		UG/L	ND	NA	NA	NA
2,6-DINITROTOLUENE		UG/L	ND	NA	NA	NA
3-NITROANILINE		UG/L	ND	NA	NA	NA
ACENAPHTHENE		UG/L	ND	NA	NA	NA
2,4-DINITROPHENOL		UG/L	ND	NA	NA	NA
4-NITROPHENOL		UG/L	ND	NA	NA	NA
DIBENZOFURAN		UG/L	ND	NA	NA	NA
2,4-DINITROTOLUENE		UG/L	ND	NA	NA	NA
DIETHYL PHTHALATE		UG/L	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER		UG/L	ND	NA	NA	NA
FLUORENE		UG/L	ND	NA	NA	NA
4-NITROANILINE		UG/L	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL		UG/L	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE		UG/L	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER		UG/L	ND	NA	NA	NA
HEXACHLOROBENZENE		UG/L	ND	NA	NA	NA
PENTACHLOROPHENOL		UG/L	ND	NA	NA	NA
PHENANTHRENE		UG/L	ND	NA	NA	NA
ANTHRACENE		UG/L	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE		UG/L	ND	NA	NA	NA
FLUORANTHENE		UG/L	ND	NA	NA	NA
CARBAZOLE		UG/L	ND	NA	NA	NA
PYRENE		UG/L	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE		UG/L	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE		UG/L	ND	NA	NA	NA
BENZO(A)ANTHRACENE		UG/L	ND	NA	NA	NA
CHRYSENE		UG/L	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE		UG/L	ND	NA	NA	NA
DI-N-OCTYL PHTHALATE		UG/L	ND	NA	NA	NA
BENZO(B)FLUORANTHENE		UG/L	ND	NA	NA	NA
BENZO(K)FLUORANTHENE		UG/L	ND	NA	NA	NA
BENZO(A)PYRENE		UG/L	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE		UG/L	ND	NA	NA	NA
DIBENZ(AH)ANTHRACENE		UG/L	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE		UG/L	ND	NA	NA	NA

**APPENDIX P.16**  
**SITE 69 NEW RIVER SURFACE WATER INORGANICS**

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No:	69-NR1-SW-06	69-NR2-SW-06	69-NR3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	08/20/92	08/20/92	08/20/92
Lab Id:	00424-09	00424-12	00424-15

Parameter	Units			
ALUMINUM	UG/L	1840	1630	554
ANTIMONY	UG/L	7 U	7 U	7 U
ARSENIC	UG/L	1.5 U	1.5 U	1.5 U
BARIUM	UG/L	15.2 BJ	13.8 BJ	11.7 BJ
BERYLLIUM	UG/L	0.5 U	0.5 U	0.5 U
CADMIUM	UG/L	1 U	1 U	1 U
CALCIUM	UG/L	110000	110000	95700
CHROMIUM	UG/L	2 U	2 U	2 U
COBALT	UG/L	1 U	1 U	1 U
COPPER	UG/L	2.45 U	2.45 U	1 U
CYANIDE	UG/L	5 U		5 U
IRON	UG/L	1200	1330	682
LEAD	UG/L	2.5 U	2.5 U	2.5 U
MAGNESIUM	UG/L	308000	304000	267000
MANGANESE	UG/L	21.6 J	21.7 J	19.2 J
MERCURY	UG/L	0.1 U	0.1 U	0.1 U
NICKEL	UG/L	4 U	4 U	4 U
POTASSIUM	UG/L	111000	102000	84900
SELENIUM	UG/L	2.5 UJ	2.5 U	2.5 U
SILVER	UG/L	4.5 BJ	3.5 BJ	1.95 U
SODIUM	UG/L	3080000	5830000	3360000 J
THALLIUM	UG/L	5 UJ	11.3 BJ	5 UJ
VANADIUM	UG/L	1 U	1 U	1 U
ZINC	UG/L	2.35 U	3.5 U	2.4 U

SITE 69 NEW RIVER SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
ALUMINUM	UG/L	1840	1341.33	689.89	8882.75
ANTIMONY	UG/L	ND	NA	NA	NA
ARSENIC	UG/L	ND	NA	NA	NA
BARIUM	UG/L	15.2 BJ	13.57	1.76	17.51
BERYLLIUM	UG/L	ND	NA	NA	NA
CADMIUM	UG/L	ND	NA	NA	NA
CALCIUM	UG/L	110000	105233.33	8256.11	122954.03
CHROMIUM	UG/L	ND	NA	NA	NA
COBALT	UG/L	ND	NA	NA	NA
COPPER	UG/L	ND	NA	NA	NA
CYANIDE	UG/L	ND	NA	NA	NA
IRON	UG/L	1330	1070.67	342.81	2445.44
LEAD	UG/L	ND	NA	NA	NA
MAGNESIUM	UG/L	308000	293000.00	22605.31	341396.69
MANGANESE	UG/L	21.7 J	20.83	1.42	23.83
MERCURY	UG/L	ND	NA	NA	NA
NICKEL	UG/L	ND	NA	NA	NA
POTASSIUM	UG/L	111000	99300.00	13257.83	129353.09
SELENIUM	UG/L	ND	NA	NA	NA
SILVER	UG/L	4.5 BJ	3.32	1.28	8.86
SODIUM	UG/L	5830000	4090000.00	1513373.71	9014598.24
THALLIUM	UG/L	11.3 BJ	7.10	3.64	27.03
VANADIUM	UG/L	ND	NA	NA	NA
ZINC	UG/L	ND	NA	NA	NA

**APPENDIX P.17**  
**SITE 69 UNNAMED TRIBUTARY SURFACE WATER ORGANICS**



SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08

Parameter	Units			
<u>PESTICIDE/PCBs</u>				
ALPHA-BHC	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
BETA-BHC	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
DELTA-BHC	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
GAMMA-BHC(LINDANE)	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
HEPTACHLOR	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
ALDRIN	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
HEPTACHLOR EPOXIDE	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
ENDOSULFAN I	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
DIELDRIN	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
4,4'-DDE	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
ENDRIN	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
ENDOSULFAN II	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
4,4'-DDD	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
ENDOSULFAN SULFATE	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
4,4'-DDT	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
METHOXYCHLOR	UG/L	0.25 UJ	0.42 UJ	0.42 UJ
ENDRIN KETONE	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
ENDRIN ALDEHYDE	UG/L	0.05 UJ	0.085 UJ	0.085 UJ
ALPHA CHLORDANE	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
GAMMA CHLORDANE	UG/L	0.025 UJ	0.042 UJ	0.042 UJ
TOXAPHENE	UG/L	2.5 UJ	4.2 UJ	4.2 UJ
PCB-1016	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
PCB-1221	UG/L	1 UJ	1.65 UJ	1.65 UJ
PCB-1232	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
PCB-1242	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
PCB-1248	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
PCB-1254	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
PCB-1260	UG/L	0.5 UJ	0.85 UJ	0.85 UJ
<u>VOLATILES</u>				
CHLOROMETHANE	UG/L	5 U	5 U	5 U
BROMOMETHANE	UG/L	5 U	5 U	5 U
VINYL CHLORIDE	UG/L	5 U	5 U	5 U
CHLOROETHANE	UG/L	5 U	5 U	5 U
METHYLENE CHLORIDE	UG/L	5 U	5 U	5 U
ACETONE	UG/L	5 U	5 U	5 U
CARBON DISULFIDE	UG/L	5 U	5 U	5 U
1,1-DICHLOROETHENE	UG/L	5 U	5 UJ	5 UJ
1,1-DICHLOROETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHENE	UG/L	5 U	5 U	5 U
CHLOROFORM	UG/L	5 U	5 U	5 U
1,2-DICHLOROETHANE	UG/L	5 U	5 U	5 U
2-BUTANONE	UG/L	5 U	5 U	5 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08

Parameter	Units			
<u>VOLATILES (Continued)</u>				
1,1,1-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
CARBON TETRACHLORIDE	UG/L	5 U	5 U	5 U
BROMODICHLOROMETHANE	UG/L	5 U	5 U	5 U
1,2-DICHLOROPROPANE	UG/L	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
TRICHLOROETHENE	UG/L	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	UG/L	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	UG/L	5 U	5 U	5 U
BENZENE	UG/L	5 U	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	UG/L	5 U	5 U	5 U
BROMOFORM	UG/L	5 U	5 U	5 U
4-METHYL-2-PENTANONE	UG/L	5 U	5 U	5 U
2-HEXANONE	UG/L	5 U	5 U	5 U
TETRACHLOROETHENE	UG/L	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	UG/L	5 U	5 U	5 U
TOLUENE	UG/L	5 U	5 U	5 U
CHLOROENZENE	UG/L	5 U	5 U	5 U
ETHYLBENZENE	UG/L	5 U	5 U	5 U
STYRENE	UG/L	5 U	5 U	5 U
TOTAL XYLENES	UG/L	5 U	5 U	5 U
<u>SEMIVOLATILES</u>				
PHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHYL) ETHER	UG/L	5 U	5 U	5 U
2-CHLOROPHENOL	UG/L	5 U	5 U	5 U
1,3-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,4-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
1,2-DICHLOROBENZENE	UG/L	5 U	5 U	5 U
2-METHYLPHENOL	UG/L	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	5 U	5 U	5 U
4-METHYLPHENOL	UG/L	5 U	5 U	5 U
N-NITROSODI-N-PROPYLAMINE	UG/L	5 U	5 U	5 U
HEXACHLOROETHANE	UG/L	5 U	5 U	5 U
NITROBENZENE	UG/L	5 U	5 U	5 U
ISOPHORONE	UG/L	5 U	5 U	5 U
2-NITROPHENOL	UG/L	5 U	5 U	5 U
2,4-DIMETHYLPHENOL	UG/L	5 U	5 U	5 U
BIS(2-CHLOROETHOXY) METHANE	UG/L	5 U	5 U	5 U
2,4-DICHLOROPHENOL	UG/L	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE	UG/L	5 U	5 U	5 U
NAPHTHALENE	UG/L	5 U	5 U	5 U
4-CHLORANILINE	UG/L	5 U	5 U	5 U
HEXACHLOROBUTADIENE	UG/L	5 U	5 U	5 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/22/92	8/20/92	8/20/92
Lab Id:	00428-02	00425-02	00425-08

Parameter	Units			
<u>SEMIVOLATILES (Continued)</u>				
4-CHLORO-3-METHYLPHENOL	UG/L	5 U	5 U	5 U
2-METHYLNAPHTHALENE	UG/L	5 U	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	UG/L	5 U	5 U	5 U
2,4,6-TRICHLOROPHENOL	UG/L	5 U	5 U	5 U
2,4,5-TRICHLOROPHENOL	UG/L	12.5 U	12.5 U	12.5 U
2-CHLORONAPHTHALENE	UG/L	5 U	5 U	5 U
2-NITROANILINE	UG/L	12.5 U	12.5 U	12.5 U
DIMETHYL PHTHALATE	UG/L	5 U	5 U	5 U
ACENAPHTHYLENE	UG/L	5 U	5 U	5 U
2,6-DINITROTOLUENE	UG/L	5 U	5 U	5 U
3-NITROANILINE	UG/L	12.5 U	12.5 U	12.5 U
ACENAPHTHENE	UG/L	5 U	5 U	5 U
2,4-DINITROPHENOL	UG/L	12.5 U	12.5 U	12.5 U
4-NITROPHENOL	UG/L	12.5 U	12.5 U	12.5 U
DIBENZOFURAN	UG/L	5 U	5 U	5 U
2,4-DINITROTOLUENE	UG/L	5 U	5 U	5 U
DIETHYL PHTHALATE	UG/L	5 U	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	UG/L	5 U	5 U	5 U
FLUORENE	UG/L	5 U	5 U	5 U
4-NITROANILINE	UG/L	12.5 U	12.5 U	12.5 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	12.5 U	12.5 U	12.5 U
N-NITRISODIPHENYLAMINE	UG/L	5 U	5 U	5 U
4-BROMOPHENYL PHENYL ETHER	UG/L	5 U	5 U	5 U
HEXACHLOROBENZENE	UG/L	5 U	5 U	5 U
PENTACHLOROPHENOL	UG/L	12.5 UJ	12.5 UJ	12.5 UJ
PHENANTHRENE	UG/L	5 U	5 U	5 U
ANTHRACENE	UG/L	5 U	5 U	5 U
DI-N-BUTYL PHTHALATE	UG/L	5 U	5 U	5 U
FLUORANTHENE	UG/L	5 UJ	5 U	5 U
CARBAZOLE	UG/L	5 U	5 U	5 U
PYRENE	UG/L	5 UJ	5 U	5 U
BUTYL BENZYL PHTHALATE	UG/L	5 U	5 U	5 U
3,3-DICHLOROBENZIDINE	UG/L	5 U	5 U	5 U
BENZO(A)ANTHRACENE	UG/L	5 U	5 U	5 U
CHRYSENE	UG/L	5 U	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	5 U	5 U	5 U
DI-N-OCTYL PHTHALATE	UG/L	5 U	5 U	5 U
BENZO(B)FLUORANTHENE	UG/L	5 U	5 U	5 U
BENZO(K)FLUORANTHENE	UG/L	5 U	5 U	5 U
BENZO(A)PYRENE	UG/L	5 U	5 U	5 U
INDENO(1,2,3-CD) PYRENE	UG/L	5 U	5 U	5 U
DIBENZ(A,H)ANTHRACENE	UG/L	5 U	5 U	5 U
BENZO(G,H,I)PERYLENE	UG/L	5 U	5 U	5 U

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC		UG/L	ND	NA	NA	NA
BETA-BHC		UG/L	ND	NA	NA	NA
DELTA-BHC		UG/L	ND	NA	NA	NA
GAMMA-BHC(LINDANE)		UG/L	ND	NA	NA	NA
HEPTACHLOR		UG/L	ND	NA	NA	NA
ALDRIN		UG/L	ND	NA	NA	NA
HEPTACHLOR EPOXIDE		UG/L	ND	NA	NA	NA
ENDOSULFAN I		UG/L	ND	NA	NA	NA
DIELDRIN		UG/L	ND	NA	NA	NA
4,4'-DDE		UG/L	ND	NA	NA	NA
ENDRIN		UG/L	ND	NA	NA	NA
ENDOSULFAN II		UG/L	ND	NA	NA	NA
4,4'-DDD		UG/L	ND	NA	NA	NA
ENDOSULFAN SULFATE		UG/L	ND	NA	NA	NA
4,4'-DDT		UG/L	ND	NA	NA	NA
METHOXYCHLOR		UG/L	ND	NA	NA	NA
ENDRIN KETONE		UG/L	ND	NA	NA	NA
ENDRIN ALDEHYDE		UG/L	ND	NA	NA	NA
ALPHA CHLORDANE		UG/L	ND	NA	NA	NA
GAMMA CHLORDANE		UG/L	ND	NA	NA	NA
TOXAPHENE		UG/L	ND	NA	NA	NA
PCB-1016		UG/L	ND	NA	NA	NA
PCB-1221		UG/L	ND	NA	NA	NA
PCB-1232		UG/L	ND	NA	NA	NA
PCB-1242		UG/L	ND	NA	NA	NA
PCB-1248		UG/L	ND	NA	NA	NA
PCB-1254		UG/L	ND	NA	NA	NA
PCB-1260		UG/L	ND	NA	NA	NA
<u>VOLATILES</u>						
CHLOROMETHANE		UG/L	ND	NA	NA	NA
BROMOMETHANE		UG/L	ND	NA	NA	NA
VINYL CHLORIDE		UG/L	ND	NA	NA	NA
CHLOROETHANE		UG/L	ND	NA	NA	NA
METHYLENE CHLORIDE		UG/L	ND	NA	NA	NA
ACETONE		UG/L	ND	NA	NA	NA
CARBON DISULFIDE		UG/L	ND	NA	NA	NA
1,1-DICHLOROETHENE		UG/L	ND	NA	NA	NA
1,1-DICHLOROETHANE		UG/L	ND	NA	NA	NA
1,2-DICHLOROETHENE		UG/L	ND	NA	NA	NA
CHLOROFORM		UG/L	ND	NA	NA	NA
1,2-DICHLOROETHANE		UG/L	ND	NA	NA	NA
2-BUTANONE		UG/L	ND	NA	NA	NA

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>VOLATILES (Continued)</u>						
1,1,1-TRICHLOROETHANE		UG/L	ND	NA	NA	NA
CARBON TETRACHLORIDE		UG/L	ND	NA	NA	NA
BROMODICHLOROMETHANE		UG/L	ND	NA	NA	NA
1,2-DICHLOROPROPANE		UG/L	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE		UG/L	ND	NA	NA	NA
TRICHLOROETHENE		UG/L	ND	NA	NA	NA
DIBROMOCHLOROMETHANE		UG/L	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE		UG/L	ND	NA	NA	NA
BENZENE		UG/L	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE		UG/L	ND	NA	NA	NA
BROMOFORM		UG/L	ND	NA	NA	NA
4-METHYL-2-PENTANONE		UG/L	ND	NA	NA	NA
2-HEXANONE		UG/L	ND	NA	NA	NA
TETRACHLOROETHENE		UG/L	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE		UG/L	ND	NA	NA	NA
TOLUENE		UG/L	ND	NA	NA	NA
CHLOROENZENE		UG/L	ND	NA	NA	NA
ETHYLBENZENE		UG/L	ND	NA	NA	NA
STYRENE		UG/L	ND	NA	NA	NA
TOTAL XYLENES		UG/L	ND	NA	NA	NA
<u>SEMIVOLATILES</u>						
PHENOL		UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER		UG/L	ND	NA	NA	NA
2-CHLOROPHENOL		UG/L	ND	NA	NA	NA
1,3-DICHLOROENZENE		UG/L	ND	NA	NA	NA
1,4-DICHLOROENZENE		UG/L	ND	NA	NA	NA
1,2-DICHLOROENZENE		UG/L	ND	NA	NA	NA
2-METHYLPHENOL		UG/L	ND	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)		UG/L	ND	NA	NA	NA
4-METHYLPHENOL		UG/L	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE		UG/L	ND	NA	NA	NA
HEXACHLOROETHANE		UG/L	ND	NA	NA	NA
NITROENZENE		UG/L	ND	NA	NA	NA
ISOPHORONE		UG/L	ND	NA	NA	NA
2-NITROPHENOL		UG/L	ND	NA	NA	NA
2,4-DIMETHYLPHENOL		UG/L	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE		UG/L	ND	NA	NA	NA
2,4-DICHLOROPHENOL		UG/L	ND	NA	NA	NA
1,2,4-TRICHLOROENZENE		UG/L	ND	NA	NA	NA
NAPHTHALENE		UG/L	ND	NA	NA	NA
4-CHLORANILINE		UG/L	ND	NA	NA	NA
HEXACHLOROBUTADIENE		UG/L	ND	NA	NA	NA

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id: Units	MAXIMUM DETECTED	NORMAL	NORMAL	LOG-NORMAL
			ARITHMETIC MEAN	STANDARD DEVIATION	UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES (Continued)</u>					
4-CHLORO-3-METHYLPHENOL	UG/L	ND	NA	NA	NA
2-METHYLNAPHTHALENE	UG/L	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	UG/L	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL	UG/L	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL	UG/L	ND	NA	NA	NA
2-CHLORONAPHTHALENE	UG/L	ND	NA	NA	NA
2-NITROANILINE	UG/L	ND	NA	NA	NA
DIMETHYL PHTHALATE	UG/L	ND	NA	NA	NA
ACENAPHTHYLENE	UG/L	ND	NA	NA	NA
2,6-DINITROTOLUENE	UG/L	ND	NA	NA	NA
3-NITROANILINE	UG/L	ND	NA	NA	NA
ACENAPHTHENE	UG/L	ND	NA	NA	NA
2,4-DINITROPHENOL	UG/L	ND	NA	NA	NA
4-NITROPHENOL	UG/L	ND	NA	NA	NA
DIBENZOFURAN	UG/L	ND	NA	NA	NA
2,4-DINITROTOLUENE	UG/L	ND	NA	NA	NA
DIETHYL PHTHALATE	UG/L	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	UG/L	ND	NA	NA	NA
FLUORENE	UG/L	ND	NA	NA	NA
4-NITROANILINE	UG/L	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	UG/L	ND	NA	NA	NA
N-NITROSODIPHENYLAMINE	UG/L	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	UG/L	ND	NA	NA	NA
HEXACHLOROBENZENE	UG/L	ND	NA	NA	NA
PENTACHLOROPHENOL	UG/L	ND	NA	NA	NA
PHENANTHRENE	UG/L	ND	NA	NA	NA
ANTHRACENE	UG/L	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE	UG/L	ND	NA	NA	NA
FLUORANTHENE	UG/L	ND	NA	NA	NA
CARBAZOLE	UG/L	ND	NA	NA	NA
PYRENE	UG/L	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE	UG/L	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE	UG/L	ND	NA	NA	NA
BENZO(A)ANTHRACENE	UG/L	ND	NA	NA	NA
CHRYSENE	UG/L	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	ND	NA	NA	NA
DI-N-OCTYL PHTHALATE	UG/L	ND	NA	NA	NA
BENZO(B)FLUORANTHENE	UG/L	ND	NA	NA	NA
BENZO(K)FLUORANTHENE	UG/L	ND	NA	NA	NA
BENZO(A)PYRENE	UG/L	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE	UG/L	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	UG/L	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE	UG/L	ND	NA	NA	NA

**APPENDIX P.18**  
**SITE 69 UNNAMED TRIBUTARY**  
**SURFACE WATER INORGANICS**

---

SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No:	69-UT1-SW-06	69-UT2-SW-06	69-UT3-SW-06
Depth:	N/A	N/A	N/A
Date Sampled:	8/21/92	8/21/92	8/21/92
Lab Id:	00428-02	00425-04	00425-08

Parameter	Units			
ALUMINUM	UG/L	1110	881	3490
ANTIMONY	UG/L	24.5 U	7 UJ	7 UJ
ARSENIC	UG/L	1.5 U	1.5 U	1.5 U
BARIUM	UG/L	23 B	15.2 JB	18 JB
BERYLLIUM	UG/L	0.5 U	0.5 U	0.5 U
CADMIUM	UG/L	3 JB	1 U	1 U
CALCIUM	UG/L	1380 B	16900	92300
CHROMIUM	UG/L	2.5 U	2 U	2 U
COBALT	UG/L	8 JB	1 U	1 U
COPPER	UG/L	7 JB	1.95 UJ	1.25 UJ
CYANIDE	UG/L	5 U	5 U	5 U
IRON	UG/L	1000	740	1840
LEAD	UG/L	2 B	0.6 U	0.5 UJ
MAGNESIUM	UG/L	846 B	37300	257000
MANGANESE	UG/L	9 JB	17.7 J	16.1 J
MERCURY	UG/L	0.1 U	0.1 U	0.1 U
NICKEL	UG/L	8.5 U	4 U	4 U
POTASSIUM	UG/L	385 B	12900	86000
SELENIUM	UG/L	2.5 U	2.5 U	2.5 UJ
SILVER	UG/L	5 U	1.65 U	1.85 U
SODIUM	UG/L	4790 JB	296000	2220000
THALLIUM	UG/L	1 UJ	1 UJ	1 UJ
VANADIUM	UG/L	10 JB	1 U	4.2 JB
ZINC	UG/L	18 B	4.4 U	2.9 U



SITE 69 UNNAMED TRIBUTARY SURFACE WATER  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO- 0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL	
Parameter	Units				
ALUMINUM	UG/L	3490	1827.00	1444.74	25744.72
ANTIMONY	UG/L	ND	NA	NA	NA
ARSENIC	UG/L	ND	NA	NA	NA
BARIUM	UG/L	23 B	18.73	3.95	27.94
BERYLLIUM	UG/L	ND	NA	NA	NA
CADMIUM	UG/L	3 JB	1.67	1.15	9.94
CALCIUM	UG/L	92300	36860.00	48635.51	1.01E+13
CHROMIUM	UG/L	ND	NA	NA	NA
COBALT	UG/L	8 JB	3.33	4.04	2066.72
COPPER	UG/L	7 JB	3.40	3.14	83.13
CYANIDE	UG/L	ND	NA	NA	NA
IRON	UG/L	1840	1193.33	574.92	4472.77
LEAD	UG/L	2 B	1.03	0.84	15.38
MAGNESIUM	UG/L	257000	98382.00	138571.19	4.01E+22
MANGANESE	UG/L	17.7 J	14.27	4.63	33.08
MERCURY	UG/L	ND	NA	NA	NA
NICKEL	UG/L	ND	NA	NA	NA
POTASSIUM	UG/L	86000	33095.00	46242.41	2.23E+18
SELENIUM	UG/L	ND	NA	NA	NA
SILVER	UG/L	ND	NA	NA	NA
SODIUM	UG/L	2220000	840263.33	1203725.79	8.39E+24
THALLIUM	UG/L	ND	NA	NA	NA
VANADIUM	UG/L	10 JB	5.07	4.56	2861.66
ZINC	UG/L	18 B	8.43	8.32	604.68

**APPENDIX P.19**  
**SITE 69 ON-SITE AND DRAINAGE AREA SEDIMENT ORGANICS**

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
<b>SEMIVOLATILES</b>							
1,2-Dichlorobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
1,2,4-Trichlorobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
1,3-Dichlorobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
1,4-Dichlorobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2-Chloronaphthalene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2-Chlorophenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2-Methylnaphthalene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2-Methylphenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2-Nitroaniline	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
2-Nitrophenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,2'-oxybis-(1-chloropropane)	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,4-Dichlorophenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,4-Dimethylphenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,4-Dinitrophenol	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
2,4-Dinitrotoluene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,4,5-Trichlorophenol	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
2,4,6-Trichlorophenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
2,6-Dinitrotoluene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
3-Nitroaniline	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
3,3'-Dichlorobenzidine	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Bromophenyl-phenylether	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Chloro-3-methylphenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Chloroaniline	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Chlorophenyl phenyl ether	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Methylphenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
4-Nitroaniline	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
4-Nitrophenol	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
4,6-Dinitro-2-methylphenol	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
Acenaphthene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Acenaphthylene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Anthracene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Benzo[a]anthracene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Benzo[a]pyrene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Benzo[g,h,i]perylene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Benzo[k]fluoranthene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
bis(2-Chloroethoxy) methane	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
bis(2-Chloroethyl) ether	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
bis(2-Ethylhexyl)phthalate	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Butyl benzyl phthalate	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Carbazole	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Chrysene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Dibenzofuran	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Dibenz[a,h]anthracene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Diethylphthalate	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Dimethyl phthalate	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
di-n-Butylphthalate	UG/KG	2150.0 U	550.0 U	305.0 U	1270.0 U	1720 U	110.0 J
di-n-Octylphthalate	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Fluoranthene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Fluorene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Hexachlorobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Hexachlorobutadiene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Hexachlorocyclopentadiene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Hexachloroethane	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Indeno[1,2,3-cd]pyrene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Isophorone	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Naphthalene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Nitrobenzene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
N-Nitroso-di-n-propylamine	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
N-nitrosodiphenylamine	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Pentachlorophenol	UG/KG	5000.0 U	1335.0 U	740.0 U	3080.0 U	4170 U	675.0 U
Phenanthrene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Phenol	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U
Pyrene	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	1720 U	279.0 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06	
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A	
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94	
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7	
<b><u>VOLATILES</u></b>							
Chloromethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Bromomethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Vinyl chloride	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Chloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Methylene chloride	UG/KG	36.0 J	8.00 J	9.00 J	48.0	8 J	8.5 U
Acetone	UG/KG	110.0 U	16.5 U	9.00 U	75.0 U	9 J	850.0 J
Carbon Disulfide	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,1-Dichloroethene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,1-Dichloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,2-Dichloroethene(total)	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	9 J	8.4 U
Chloroform	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,2-Dichloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
2-Butanone	UG/KG	36.0 J	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,1,1-Trichloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Carbon tetrachloride	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Bromodichloromethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,2-Dichloropropane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
cis-1,3-Dichloropropene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Trichloroethene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Dibromochloromethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,1,2-Trichloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Benzene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
trans-1,3-Dichloropropene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Bromoform	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
4-Methyl-2-pentanone	UG/KG	14.0 J	16.7 U	9.3 U	38.5 U	10.5 U	17.0
2-Hexanone	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Tetrachloroethene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
1,1,2,2-Tetrachloroethane	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Toluene	UG/KG	62.5 U	16.7 U	9.3 U	18.0 J	10.5 U	8.4 U
Chlorobenzene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Ethylbenzene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Styrene	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U
Xylenes (total)	UG/KG	62.5 U	16.7 U	9.3 U	38.5 U	10.5 U	8.4 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	10.6 UJ	2.83 UJ	1.62 UJ	3.69 UJ	1.005 UJ
beta-BHC	UG/KG	10.6 UJ	2.83 UJ	1.62 UJ	3.69 UJ	1.005 UJ
delta-BHC	UG/KG	10.6 UJ	2.83 UJ	1.62 UJ	3.69 UJ	1.005 UJ
Lindane (gamma-BHC)	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Heptachlor	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Aldrin	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Heptachlor epoxide	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Endosulfan I	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Dieldrin	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
4,4'-DDE	UG/KG	20.6 UJ	13.3 J	3.14 U	7.2 UJ	1.945 UJ
Endrin	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
Endosulfan II	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
4,4'-DDD	UG/KG	20.6 UJ	4.90 J	1.50 J	13.9 J	1.945 UJ
Endosulfan sulfate	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
4,4'-DDT	UG/KG	20.6 UJ	5.5 U	3.14 U	6.60 J	1.945 UJ
Methoxychlor	UG/KG	106.0 UJ	28.3 UJ	16.2 UJ	36.9 UJ	10.05 UJ
Endrin ketone	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
Endrin aldehyde	UG/KG	20.6 UJ	5.5 U	3.14 U	7.2 UJ	1.945 UJ
alpha-Chlordane	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
gamma-Chlordane	UG/KG	10.6 UJ	2.83 U	1.62 U	3.69 UJ	1.005 UJ
Toxaphene	UG/KG	1060.0 UJ	283.0 U	161.5 U	369.0 UJ	100.5 UJ
Aroclor 1016	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	19.45 UJ
Aroclor 1221	UG/KG	419.0 UJ	111.5 U	63.5 U	145.5 UJ	39.55 UJ
Aroclor 1232	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	19.45 UJ
Aroclor 1242	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	19.45 UJ
Aroclor 1248	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	19.45 UJ
Aroclor 1254	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	79 J
Aroclor 1260	UG/KG	206.0 UJ	55.0 U	31.4 U	71.5 UJ	19.45 UJ

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	960.0 J	550.0 U	305.0 U	1270.0 U	60.0 J
Chloroacetophenone	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	279.0 U
Hydroxyacetophenone	UG/KG	10300.0 U	2750.0 U	1525.0 U	6350.0 U	1395.0 U
Bis(2-chloroethyl)disulfide	UG/KG	10300.0 U	2750.0 U	1525.0 U	6350.0 U	1395.0 U
Bis(2-chloroethyl)trisulfide	UG/KG	10300.0 U	2750.0 U	1525.0 U	6350.0 U	1395.0 U
1,4-Dithiane	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	279.0 U
1,4-Oxathiane	UG/KG	2060.0 U	550.0 U	305.0 U	1270.0 U	279.0 U
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	40.6 U	10.5 U	5.8 U	24.1 U	5.3 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-0S-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

SEMIVOLATILES

1,2-Dichlorobenzene	UG/KG	201.5 U
1,2,4-Trichlorobenzene	UG/KG	201.5 U
1,3-Dichlorobenzene	UG/KG	201.5 U
1,4-Dichlorobenzene	UG/KG	201.5 U
2-Chloronaphthalene	UG/KG	201.5 U
2-Chlorophenol	UG/KG	201.5 U
2-Methylnaphthalene	UG/KG	201.5 U
2-Methylphenol	UG/KG	201.5 U
2-Nitroaniline	UG/KG	488.0 U
2-Nitrophenol	UG/KG	201.5 U
2,2'-oxybis-(1-chloropropane)	UG/KG	201.5 U
2,4-Dichlorophenol	UG/KG	201.5 U
2,4-Dimethylphenol	UG/KG	201.5 U
2,4-Dinitrophenol	UG/KG	488.0 U
2,4-Dinitrotoluene	UG/KG	201.5 U
2,4,5-Trichlorophenol	UG/KG	488.0 U
2,4,6-Trichlorophenol	UG/KG	201.5 U
2,6-Dinitrotoluene	UG/KG	201.5 U
3-Nitroaniline	UG/KG	488.0 U
3,3'-Dichlorobenzidine	UG/KG	201.5 U
4-Bromophenyl-phenylether	UG/KG	201.5 U
4-Chloro-3-methylphenol	UG/KG	201.5 U
4-Chloroaniline	UG/KG	201.5 U
4-Chlorophenyl phenyl ether	UG/KG	201.5 U
4-Methylphenol	UG/KG	201.5 U
4-Nitroaniline	UG/KG	488.0 U
4-Nitrophenol	UG/KG	488.0 U
4,6-Dinitro-2-methylphenol	UG/KG	488.0 U
Acenaphthene	UG/KG	201.5 U
Acenaphthylene	UG/KG	201.5 U
Anthracene	UG/KG	201.5 U
Benzo[a]anthracene	UG/KG	201.5 U
Benzo[a]pyrene	UG/KG	201.5 U



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-OS-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

---

SEMIVOLATILES Cont.

Benzo[b]fluoranthene	UG/KG	201.5 U
Benzo[g,h,i]perylene	UG/KG	201.5 U
Benzo[k]fluoranthene	UG/KG	201.5 U
bis(2-Chloroethoxy) methane	UG/KG	201.5 U
bis(2-Chloroethyl) ether	UG/KG	201.5 U
bis(2-Ethylhexyl)phthalate	UG/KG	201.5 U
Butyl benzyl phthalate	UG/KG	201.5 U
Carbazole	UG/KG	201.5 U
Chrysene	UG/KG	201.5 U
Dibenzofuran	UG/KG	201.5 U
Dibenz[a,h]anthracene	UG/KG	201.5 U
Diethylphthalate	UG/KG	201.5 U
Dimethyl phthalate	UG/KG	201.5 U
di-n-Butylphthalate	UG/KG	110.0 J
di-n-Octylphthalate	UG/KG	201.5 U
Fluoranthene	UG/KG	201.5 U
Fluorene	UG/KG	201.5 U
Hexachlorobenzene	UG/KG	201.5 U
Hexachlorobutadiene	UG/KG	201.5 U
Hexachlorocyclopentadiene	UG/KG	201.5 U
Hexachloroethane	UG/KG	201.5 U
Indeno[1,2,3-cd]pyrene	UG/KG	201.5 U
Isophorone	UG/KG	201.5 U
Naphthalene	UG/KG	201.5 U
Nitrobenzene	UG/KG	201.5 U
N-Nitroso-di-n-propylamine	UG/KG	201.5 U
N-nitrosodiphenylamine	UG/KG	201.5 U
Pentachlorophenol	UG/KG	488.0 U
Phenanthrene	UG/KG	201.5 U
Phenol	UG/KG	201.5 U
Pyrene	UG/KG	201.5 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-OS-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

VOLATILES

Chloromethane	UG/KG	6.1 U
Bromomethane	UG/KG	6.1 U
Vinyl chloride	UG/KG	6.1 U
Chloroethane	UG/KG	6.1 U
Methylene chloride	UG/KG	6.00 U
Acetone	UG/KG	170.0 J
Carbon Disulfide	UG/KG	6.1 U
1,1-Dichloroethene	UG/KG	6.1 U
1,1-Dichloroethane	UG/KG	6.1 U
1,2-Dichloroethene(total)	UG/KG	6.1 U
Chloroform	UG/KG	6.1 U
1,2-Dichloroethane	UG/KG	6.1 U
2-Butanone	UG/KG	6.1 UJ
1,1,1-Trichloroethane	UG/KG	6.1 U
Carbon tetrachloride	UG/KG	6.1 U
Bromodichloromethane	UG/KG	6.1 U
1,2-Dichloropropane	UG/KG	6.1 U
cis-1,3-Dichloropropene	UG/KG	6.1 U
Trichloroethene	UG/KG	6.1 U
Dibromochloromethane	UG/KG	6.1 U
1,1,2-Trichloroethane	UG/KG	6.1 U
Benzene	UG/KG	6.1 U
trans-1,3-Dichloropropene	UG/KG	6.1 U
Bromoform	UG/KG	6.1 U
4-Methyl-2-pentanone	UG/KG	9.00 J
2-Hexanone	UG/KG	6.1 U
Tetrachloroethene	UG/KG	6.1 U
1,1,2,2-Tetrachloroethane	UG/KG	6.1 U
Toluene	UG/KG	6.1 U
Chlorobenzene	UG/KG	6.1 U
Ethylbenzene	UG/KG	6.1 U
Styrene	UG/KG	6.1 U
Xylenes (total)	UG/KG	6.1 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID: 69-0S-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

<u>PESTICIDE/PCBS</u>		
alpha-BHC	UG/KG	1.04 UJ
beta-BHC	UG/KG	1.04 UJ
delta-BHC	UG/KG	1.04 UJ
Lindane (gamma-BHC)	UG/KG	1.04 UJ
Heptachlor	UG/KG	1.04 UJ
Aldrin	UG/KG	1.04 UJ
Heptachlor epoxide	UG/KG	1.04 UJ
Endosulfan I	UG/KG	1.04 UJ
Dieldrin	UG/KG	2.01 UJ
4,4'-DDE	UG/KG	2.01 UJ
Endrin	UG/KG	2.01 UJ
Endosulfan II	UG/KG	2.01 UJ
4,4'-DDD	UG/KG	2.01 UJ
Endosulfan sulfate	UG/KG	2.01 UJ
4,4'-DDT	UG/KG	2.01 UJ
Methoxychlor	UG/KG	10.4 UJ
Endrin ketone	UG/KG	2.01 UJ
Endrin aldehyde	UG/KG	2.01 UJ
alpha-Chlordane	UG/KG	1.04 UJ
gamma-Chlordane	UG/KG	1.04 UJ
Toxaphene	UG/KG	103.5 UJ
Aroclor 1016	UG/KG	20.1 UJ
Aroclor 1221	UG/KG	40.9 UJ
Aroclor 1232	UG/KG	20.1 UJ
Aroclor 1242	UG/KG	20.1 UJ
Aroclor 1248	UG/KG	20.1 UJ
Aroclor 1254	UG/KG	20.1 UJ
Aroclor 1260	UG/KG	20.1 UJ

STATISTICAL SUMMARY  
OPERABLE UNIT NO. 4 (SITE 69)  
ONSITE AND DRAINAGE AREA SEDIMENT  
MCB CAMP LEJEUNE, NORTH CAROLINA  
REMEDIAL INVESTIGATION - CTO-0212  
ORGANICS

Client Sample ID: 69-OS-SD03-06  
Laboratory Sample ID: 9401041-11A  
Date Sampled: 01/07/94  
Percent Solids 82.4

---

CHEMICAL SURETY

Acetophenone	UG/KG	201.5 U
Chloroacetophenone	UG/KG	201.5 U
Hydroxyacetophenone	UG/KG	1005.0 U
Bis(2'-chloroethyl)disulfide	UG/KG	1005.0 U
Bis(2'-chloroethyl)trisulfide	UG/KG	1005.0 U
1,4-Dithiane	UG/KG	201.5 U
1,4-Oxathiane	UG/KG	201.5 U

THIODIGLYCOL

Thiodiglycol	MG/KG	3.78 U
--------------	-------	--------

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:  
 Percent Solids

		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG NORMAL UPPER 95% CONFIDENCE
<b>SEMIVOLATILES</b>						
1,2-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,3-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	UG/KG	ND	NA	NA	NA	NA
2-Chloronaphthalene	UG/KG	ND	NA	NA	NA	NA
2-Chlorophenol	UG/KG	ND	NA	NA	NA	NA
2-Methylnaphthalene	UG/KG	ND	NA	NA	NA	NA
2-Methylphenol	UG/KG	ND	NA	NA	NA	NA
2-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
2-Nitrophenol	UG/KG	ND	NA	NA	NA	NA
2,2'-oxybis-(1-chloropropane)	UG/KG	ND	NA	NA	NA	NA
2,4-Dichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dimethylphenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dinitrophenol	UG/KG	ND	NA	NA	NA	NA
2,4-Dinitrotoluene	UG/KG	ND	NA	NA	NA	NA
2,4,5-Trichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,4,6-Trichlorophenol	UG/KG	ND	NA	NA	NA	NA
2,6-Dinitrotoluene	UG/KG	ND	NA	NA	NA	NA
3-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
3,3'-Dichlorobenzidine	UG/KG	ND	NA	NA	NA	NA
4-Bromophenyl-phenylether	UG/KG	ND	NA	NA	NA	NA
4-Chloro-3-methylphenol	UG/KG	ND	NA	NA	NA	NA
4-Chloroaniline	UG/KG	ND	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	UG/KG	ND	NA	NA	NA	NA
4-Methylphenol	UG/KG	ND	NA	NA	NA	NA
4-Nitroaniline	UG/KG	ND	NA	NA	NA	NA
4-Nitrophenol	UG/KG	ND	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	UG/KG	ND	NA	NA	NA	NA
Acenaphthene	UG/KG	ND	NA	NA	NA	NA
Acenaphthylene	UG/KG	ND	NA	NA	NA	NA
Anthracene	UG/KG	ND	NA	NA	NA	NA
Benzo[a]anthracene	UG/KG	ND	NA	NA	NA	NA
Benzo[a]pyrene	UG/KG	ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:  
 Percent Solids

		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG NORMAL UPPER 95% CONFIDENCE
<u>SEMIVOLATILES Cont.</u>						
Benzo[b]fluoranthene	UG/KG	ND	NA	NA	NA	NA
Benzo[g,h,i]perylene	UG/KG	ND	NA	NA	NA	NA
Benzo[k]fluoranthene	UG/KG	ND	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	UG/KG	ND	NA	NA	NA	NA
bis(2-Chloroethyl) ether	UG/KG	ND	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	UG/KG	ND	NA	NA	NA	NA
Butyl benzyl phthalate	UG/KG	ND	NA	NA	NA	NA
Carbazole	UG/KG	ND	NA	NA	NA	NA
Chrysene	UG/KG	ND	NA	NA	NA	NA
Dibenzofuran	UG/KG	ND	NA	NA	NA	NA
Dibenz[a,h]anthracene	UG/KG	ND	NA	NA	NA	NA
Diethylphthalate	UG/KG	ND	NA	NA	NA	NA
Dimethyl phthalate	UG/KG	ND	NA	NA	NA	NA
di-n-Butylphthalate	UG/KG	140 J	1744.3	1687.4	2874.8	6718.6
di-n-Octylphthalate	UG/KG	ND	NA	NA	NA	NA
Fluoranthene	UG/KG	ND	NA	NA	NA	NA
Fluorene	UG/KG	ND	NA	NA	NA	NA
Hexachlorobenzene	UG/KG	ND	NA	NA	NA	NA
Hexachlorobutadiene	UG/KG	ND	NA	NA	NA	NA
Hexachlorocyclopentadiene	UG/KG	ND	NA	NA	NA	NA
Hexachloroethane	UG/KG	ND	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	UG/KG	ND	NA	NA	NA	NA
Isophorone	UG/KG	ND	NA	NA	NA	NA
Naphthalene	UG/KG	ND	NA	NA	NA	NA
Nitrobenzene	UG/KG	ND	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	UG/KG	ND	NA	NA	NA	NA
N-nitrosodiphenylamine	UG/KG	ND	NA	NA	NA	NA
Pentachlorophenol	UG/KG	ND	NA	NA	NA	NA
Phenanthrene	UG/KG	ND	NA	NA	NA	NA
Phenol	UG/KG	ND	NA	NA	NA	NA
Pyrene	UG/KG	ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:  
 Percent Solids

		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG NORMAL UPPER 95% CONFIDENCE
<u>VOLATILES</u>						
Chloromethane	UG/KG	ND	NA	NA	NA	NA
Bromomethane	UG/KG	ND	NA	NA	NA	NA
Vinyl chloride	UG/KG	ND	NA	NA	NA	NA
Chloroethane	UG/KG	ND	NA	NA	NA	NA
Methylene chloride	UG/KG	48	19.7	15.9	30.4	39.5
Acetone	UG/KG	850 J	207.1	295.4	405.0	6583.9
Carbon Disulfide	UG/KG	ND	NA	NA	NA	NA
1,1-Dichloroethene	UG/KG	ND	NA	NA	NA	NA
1,1-Dichloroethane	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloroethene(total)	UG/KG	9 J	41.7	43.5	70.8	58.8
Chloroform	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloroethane	UG/KG	ND	NA	NA	NA	NA
2-Butanone	UG/KG	36 J	30.7	22.2	45.5	35.0
1,1,1-Trichloroethane	UG/KG	ND	NA	NA	NA	NA
Carbon tetrachloride	UG/KG	ND	NA	NA	NA	NA
Bromodichloromethane	UG/KG	ND	NA	NA	NA	NA
1,2-Dichloropropane	UG/KG	ND	NA	NA	NA	NA
cis-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA	NA
Trichloroethene	UG/KG	ND	NA	NA	NA	NA
Dibromochloromethane	UG/KG	ND	NA	NA	NA	NA
1,1,2-Trichloroethane	UG/KG	ND	NA	NA	NA	NA
Benzene	UG/KG	ND	NA	NA	NA	NA
trans-1,3-Dichloropropene	UG/KG	ND	NA	NA	NA	NA
Bromoform	UG/KG	ND	NA	NA	NA	NA
4-Methyl-2-pentanone	UG/KG	17	27.1	23.2	42.6	24.1
2-Hexanone	UG/KG	ND	NA	NA	NA	NA
Tetrachloroethene	UG/KG	ND	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	UG/KG	ND	NA	NA	NA	NA
Toluene	UG/KG	18 J	35.0	40.2	61.9	38.8
Chlorobenzene	UG/KG	ND	NA	NA	NA	NA
Ethylbenzene	UG/KG	ND	NA	NA	NA	NA
Styrene	UG/KG	ND	NA	NA	NA	NA
Xylenes (total)	UG/KG	ND	NA	NA	NA	NA

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:  
 Laboratory Sample ID:  
 Date Sampled:  
 Percent Solids

		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG NORMAL UPPER 95% CONFIDENCE
<u>PESTICIDE/PCBS</u>						
alpha-BHC	UG/KG	3.1 J	6.4	6.8	11.0	8.6
beta-BHC	UG/KG	23.4 J	9.3	9.1	15.4	36.6
delta-BHC	UG/KG	54.5 J	13.7	19.2	26.6	114.2
Lindane (gamma-BHC)	UG/KG	ND	NA	NA	NA	NA
Heptachlor	UG/KG	ND	NA	NA	NA	NA
Aldrin	UG/KG	ND	NA	NA	NA	NA
Heptachlor epoxide	UG/KG	ND	NA	NA	NA	NA
Endosulfan I	UG/KG	ND	NA	NA	NA	NA
Dieldrin	UG/KG	ND	NA	NA	NA	NA
4,4'-DDE	UG/KG	13.3 J	12.6	13.3	21.6	23.2
Endrin	UG/KG	ND	NA	NA	NA	NA
Endosulfan II	UG/KG	ND	NA	NA	NA	NA
4,4'-DDD	UG/KG	13.9 J	10.7	14.0	20.1	23.0
Endosulfan sulfate	UG/KG	ND	NA	NA	NA	NA
4,4'-DDT	UG/KG	6.6 J	10.7	13.7	19.9	15.0
Methoxychlor	UG/KG	ND	NA	NA	NA	NA
Endrin ketone	UG/KG	ND	NA	NA	NA	NA
Endrin aldehyde	UG/KG	ND	NA	NA	NA	NA
alpha-Chlordane	UG/KG	ND	NA	NA	NA	NA
gamma-Chlordane	UG/KG	ND	NA	NA	NA	NA
Toxaphene	UG/KG	ND	NA	NA	NA	NA
Aroclor 1016	UG/KG	ND	NA	NA	NA	NA
Aroclor 1221	UG/KG	ND	NA	NA	NA	NA
Aroclor 1232	UG/KG	ND	NA	NA	NA	NA
Aroclor 1242	UG/KG	ND	NA	NA	NA	NA
Aroclor 1248	UG/KG	ND	NA	NA	NA	NA
Aroclor 1254	UG/KG	125 J	128.8	129.7	215.7	197.3
Aroclor 1260	UG/KG	ND	NA	NA	NA	NA



STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 ORGANICS

Client Sample ID:

Laboratory Sample ID:

Date Sampled:

Percent Solids

		MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG NORMAL UPPER 95% CONFIDENCE
<u>CHEMICAL SURETY</u>						
Acetophenone	UG/KG	960 J	1301.9	1230.9	2126.6	4520.2
Chloroacetophenone	UG/KG	ND	NA	NA	NA	NA
Hydroxyacetophenone	UG/KG	ND	NA	NA	NA	NA
Bis(2'-chloroethyl)disulfide	UG/KG	ND	NA	NA	NA	NA
Bis(2'-chloroethyl)trisulfide	UG/KG	ND	NA	NA	NA	NA
1,4-Dithiane	UG/KG	ND	NA	NA	NA	NA
1,4-Oxathiane	UG/KG	ND	NA	NA	NA	NA
<u>THIODIGLYCOL</u>						
Thiodiglycol	MG/KG	ND	NA	NA	NA	NA

**APPENDIX P.20**  
**SITE 69 ON-SITE AND DRAINAGE**  
**AREA SEDIMENT INORGANICS**

---

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:	69-DA-SD01-06	69-DA-SD02-06	69-DA-SD03-06	69-DA-SD04-06	69-OS-SD01-06	69-OS-SD02-06
Laboratory Sample ID:	9401055-01A	9401055-02A	9401055-07A	9401055-08A	9401043-06A	9401041-12A
Date Sampled:	01/08/94	01/08/94	01/09/94	01/09/94		01/07/94
Percent Solids	7.69	29.9	54.2	13.0	48.2	59.7

	UNITS					
Aluminum	MG/KG	2900.0	10200.0	1050.0	23700.0	1570
Antimony	MG/KG	10.3 U	2.65 U	1.45 U	6.1 U	1.65 U
Arsenic	MG/KG	3.75 UJ	0.95 U	0.55 U	2.25 U	0.6 U
Barium	MG/KG	17.8 U	29.6	6.80	131.0	12.1
Beryllium	MG/KG	1.70 U	0.940	0.240 U	2.00	0.27 U
Cadmium	MG/KG	3.10 U	0.80 U	0.445 U	1.85 U	0.5 U
Calcium	MG/KG	5480.0	1830.0	403.0	5600.0	107
Chromium	MG/KG	9.4 U	10.9 J	1.35 U	21.5	1.5 U
Cobalt	MG/KG	25.2 U	6.5 U	3.60 U	14.9 U	4 U
Copper	MG/KG	21.1 U	5.4 U	3.00 U	12.5 U	3.35 U
Iron	MG/KG	779.0	2050.0	369.0	8930.0	2360
Lead	MG/KG	14.2	18.3	4.00	45.5	5.3
Magnesium	MG/KG	5190.0	1210.0	51.9	886.0	28
Manganese	MG/KG	19.6	38.2	3.30	44.1	5.5
Mercury	MG/KG	0.560	0.080 U	0.030 U	0.500	0.06 U
Nickel	MG/KG	17.7 U	4.55 U	2.50 U	10.5 U	2.8 U
Potassium	MG/KG	389.5 UJ	452.0 J	55.5 UJ	231.0 UJ	62 UJ
Selenium	MG/KG	3.25 U	0.85 U	0.460 UJ	1.90 UJ	0.5 UJ
Silver	MG/KG	74.5 J	0.135 UJ	0.260 J	0.310 UJ	17.7 J
Sodium	MG/KG	17800.0	1410.0	34.3 U	143.0 U	38.6 U
Thallium	MG/KG	6.0 U	1.55 U	0.85 U	3.55 U	0.95 U
Vanadium	MG/KG	21.6 U	5.6 U	3.05 U	12.8 U	3.45 U
Zinc	MG/KG	44.8	15.7	44.2	551.0	98.4

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID: 69-OS-SD03-06  
 Laboratory Sample ID: 9401041-11A  
 Date Sampled: 01/07/94  
 Percent Solids 82.4

---

	<u>UNITS</u>	
Aluminum	MG/KG	2300.0
Antimony	MG/KG	0.95 U
Arsenic	MG/KG	0.350 U
Barium	MG/KG	1.65 U
Beryllium	MG/KG	0.160 U
Cadmium	MG/KG	0.290 U
Calcium	MG/KG	15.2 U
Chromium	MG/KG	2.90
Cobalt	MG/KG	2.35 U
Copper	MG/KG	1.95 U
Iron	MG/KG	571.0
Lead	MG/KG	3.10 J
Magnesium	MG/KG	49.5
Manganese	MG/KG	1.40
Mercury	MG/KG	0.020 U
Nickel	MG/KG	1.65 U
Potassium	MG/KG	104.0
Selenium	MG/KG	0.305 UJ
Silver	MG/KG	0.050 UJ
Sodium	MG/KG	23.1 UJ
Thallium	MG/KG	0.55 U
Vanadium	MG/KG	2.00 U
Zinc	MG/KG	3.30 U

STATISTICAL SUMMARY  
 OPERABLE UNIT NO. 4 (SITE 69)  
 ONSITE AND DRAINAGE AREA SEDIMENT  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 REMEDIAL INVESTIGATION - CTO-0212  
 TAL METALS

Client Sample ID:					
Laboratory Sample ID:					
Date Sampled:					
Percent Solids	MAXIMUM DETECTED	ARITHMETIC MEAN	STANDARD DEVIATION	NORMAL UPPER 95% CONFIDENCE	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
	<u>UNITS</u>				
Aluminum	MG/KG 23700	6181.4	8346.0	11773.1	30559.4
Antimony	MG/KG ND	NA	NA	NA	NA
Arsenic	MG/KG ND	NA	NA	NA	NA
Barium	MG/KG 131	31.9	45.5	62.3	384.5
Beryllium	MG/KG 2	1.2	1.1	1.9	3.7
Cadmium	MG/KG ND	NA	NA	NA	NA
Calcium	MG/KG 5600	1927.5	2546.6	3633.6	5242719.5
Chromium	MG/KG 21.5	8.9	8.3	14.4	40.8
Cobalt	MG/KG ND	NA	NA	NA	NA
Copper	MG/KG 21.7	16.6	13.8	25.9	33.3
Iron	MG/KG 8930	2227.6	3058.8	4276.9	10389.2
Lead	MG/KG 45.5	14.1	14.9	24.1	44.9
Magnesium	MG/KG 5190	1064.7	1882.3	2325.8	513477.2
Manganese	MG/KG 44.1	16.3	18.2	28.4	277.2
Mercury	MG/KG 0.56	0.2	0.2	0.4	1.8
Nickel	MG/KG ND	NA	NA	NA	NA
Potassium	MG/KG 452 J	304.7	265.6	482.7	615.0
Selenium	MG/KG ND	NA	NA	NA	NA
Silver	MG/KG 74.5 J	13.4	27.7	31.9	237331.5
Sodium	MG/KG 17800	2821.7	6623.1	7259.0	2553601.7
Thallium	MG/KG ND	NA	NA	NA	NA
Vanadium	MG/KG ND	NA	NA	NA	NA
Zinc	MG/KG 551	115.0	194.5	245.3	1790.9

**APPENDIX P.21**  
**SITE 69 EVERETT CREEK SEDIMENT ORGANICS**

---

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92
	Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
BETA-BHC	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
DELTA-BHC	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
GAMMA-BHC(LINDANE)	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
HEPTACHLOR	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
ALDRIN	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
HEPTACHLOR EPOXIDE	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
ENDOSULFAN I	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
DIELDRIN	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
4,4'-DDE	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	6.6 J
ENDRIN	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
ENDOSULFAN II	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
4,4'-DDD	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
ENDOSULFAN SULFATE	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
4,4'-DDT	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
METHOXYCHLOR	UG/KG	65 U	37 U	29 U	10.5 UJ	17.5 U
ENDRIN KETONE	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
ENDRIN ALDEHYDE	UG/KG	12.5 U	7 U	5.5 U	2.05 UJ	3.4 U
ALPHA CHLORDANE	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
GAMMA CHLORDANE	UG/KG	6.5 U	3.7 U	2.9 U	1.05 UJ	1.75 U
TOXAPHENE	UG/KG	650 U	370 U	290 U	105 UJ	175 U
PCB-1016	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
PCB-1221	UG/KG	255 U	145 U	115 U	41 UJ	70 U
PCB-1232	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
PCB-1242	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
PCB-1248	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
PCB-1254	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
PCB-1260	UG/KG	125 U	70 U	55 U	20.5 UJ	34 U
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
BROMOMETHANE	UG/KG	41.5 U	1300 U	17 U	6 UJ	7.5 UJ
VINYL CHLORIDE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
CHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
METHYLENE CHLORIDE	UG/KG	41.5 U	1200 J	17 U	6 U	7.5 U
ACETONE	UG/KG	41.5 U	4600	240	6 U	7.5 U
CARBON DISULFIDE	UG/KG	41.5 U	1300 U	35	6 U	7.5 U
1,1-DICHLOROETHENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,1-DICHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,2-DICHLOROETHENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
CHLOROFORM	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,2-DICHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
2-BUTANONE	UG/KG	41.5 U	5300	17 U	6 U	7.5 U

SITE 69 EVERETT CREEK SEDIMENT  
STATISTICAL SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

	Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92
	Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
CARBON TETRACHLORIDE	UG/KG	41.5 U	1300 UJ	17 U	6 U	7.5 U
BROMODICHLOROMETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,2-DICHLOROPROPANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
CIS-1,3-DICHLOROPROPENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
TRICHLOROETHENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
DIBROMOCHLOROMETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,1,2-TRICHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
BENZENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
BROMOFORM	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
4-METHYL-2-PENTANONE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
2-HEXANONE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
TETRACHLOROETHENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
TOLUENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
CHLOROBENZENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
ETHYLBENZENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
STYRENE	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
TOTAL XYLENES	UG/KG	41.5 U	1300 U	17 U	6 U	7.5 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	1250 U	700 U	550 U	205 UJ	340 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	1250 U	700 U	550 U	205 U	340 U
2-CHLOROPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
1,3-DICHLOROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
1,4-DICHLOROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
1,2-DICHLOROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2-METHYLPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,2-OXYBIS(1-CHLOROPROPANE)	UG/KG	1250 U	700 U	550 U	205 U	340 UJ
4-METHYLPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	1250 U	700 U	550 U	205 U	340 UJ
HEXACHLOROETHANE	UG/KG	1250 U	700 UJ	550 UJ	205 U	340 U
NITROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
ISOPHORONE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2-NITROPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4-DIMETHYLPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4-DICHLOROPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
1,2,4-TRICHLOROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
NAPHTHALENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
4-CHLORANILINE	UG/KG	1250 U	700 U	550 U	205 U	340 U
HEXACHLOROBUTADIENE	UG/KG	1250 U	700 U	550 U	205 U	340 U



SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92	
Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03	
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
2-METHYLNAPHTHALENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4,6-TRICHLOROPHENOL	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4,5-TRICHLOROPHENOL	UG/KG	3050 U	1750 U	1350 U	490 U	800 U
2-CHLORONAPHTHALENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2-NITROANILINE	UG/KG	3050 U	1750 U	1350 U	490 U	800 U
DIMETHYL PHTHALATE	UG/KG	1250 U	700 U	550 U	205 U	340 U
ACENAPHTHYLENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,6-DINITROTOLUENE	UG/KG	1250 U	700 UJ	550 UJ	205 U	340 U
3-NITROANILINE	UG/KG	3050 U	1750 U	1350 U	490 U	800 U
ACENAPHTHENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4-DINITROPHENOL	UG/KG	3050 U	1750 UJ	1350 UJ	490 U	800 U
4-NITROPHENOL	UG/KG	3050 U	1750 U	1350 U	490 U	800 U
DIBENZOFURAN	UG/KG	1250 U	700 U	550 U	205 U	340 U
2,4-DINITROTOLUENE	UG/KG	1250 U	700 UJ	550 UJ	205 U	340 U
DIETHYL PHTHALATE	UG/KG	1250 U	700 U	550 U	205 U	340 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	1250 U	700 U	550 U	205 U	340 U
FLUORENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
4-NITROANILINE	UG/KG	3050 U	1750 U	1350 U	490 U	800 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	3050 U	1750 UJ	1350 UJ	490 U	800 U
N-NITRISODIPHENYLAMINE	UG/KG	1250 U	700 U	550 U	205 U	340 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	1250 U	700 U	550 U	205 U	340 U
HEXACHLOROBENZENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
PENTACHLOROPHENOL	UG/KG	3050 U	1750 U	1350 U	490 UJ	800 U
PHENANTHRENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
ANTHRACENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
DI-N-BUTYL PHTHALATE	UG/KG	1250 U	700 U	550 U	205 U	340 U
FLUORANTHENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
CARBAZOLE	UG/KG	1250 U	700 U	550 U	205 U	340 U
PYRENE	UG/KG	1250 U	700 U	550 U	205 UJ	340 UJ
BUTYL BENZYL PHTHALATE	UG/KG	1250 U	700 U	550 U	205 U	340 U
3,3-DICHLOROBENZIDINE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BENZO(A)ANTHRACENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
CHRYSENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	1250 U	700 U	550 U	85 J	130 J
DI-N-OCTYL PHTHALATE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BENZO(B)FLUORANTHENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BENZO(K)FLUORANTHENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BENZO(A)PYRENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
INDENO(1,2,3-CD) PYRENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
DIBENZ(A,H)ANTHRACENE	UG/KG	1250 U	700 U	550 U	205 U	340 U
BENZO(G,H,I)PERYLENE	UG/KG	1250 U	700 U	550 U	205 U	340 U

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>PESTICIDE/PCBS</u>					
ALPHA-BHC	UG/KG	ND	NA	NA	NA
BETA-BHC	UG/KG	ND	NA	NA	NA
DELTA-BHC	UG/KG	ND	NA	NA	NA
GAMMA-BHC(LINDANE)	UG/KG	ND	NA	NA	NA
HEPTACHLOR	UG/KG	ND	NA	NA	NA
ALDRIN	UG/KG	ND	NA	NA	NA
HEPTACHLOR EPOXIDE	UG/KG	ND	NA	NA	NA
ENDOSULFAN I	UG/KG	ND	NA	NA	NA
DIELDRIN	UG/KG	ND	NA	NA	NA
4,4'-DDE	UG/KG	6.6 J	6.7	3.8	14.0
ENDRIN	UG/KG	ND	NA	NA	NA
ENDOSULFAN II	UG/KG	ND	NA	NA	NA
4,4'-DDD	UG/KG	ND	NA	NA	NA
ENDOSULFAN SULFATE	UG/KG	ND	NA	NA	NA
4,4'-DDT	UG/KG	ND	NA	NA	NA
METHOXYCHLOR	UG/KG	ND	NA	NA	NA
ENDRIN KETONE	UG/KG	ND	NA	NA	NA
ENDRIN ALDEHYDE	UG/KG	ND	NA	NA	NA
ALPHA CHLORDANE	UG/KG	ND	NA	NA	NA
GAMMA CHLORDANE	UG/KG	ND	NA	NA	NA
TOXAPHENE	UG/KG	ND	NA	NA	NA
PCB-1016	UG/KG	ND	NA	NA	NA
PCB-1221	UG/KG	ND	NA	NA	NA
PCB-1232	UG/KG	ND	NA	NA	NA
PCB-1242	UG/KG	ND	NA	NA	NA
PCB-1248	UG/KG	ND	NA	NA	NA
PCB-1254	UG/KG	ND	NA	NA	NA
PCB-1260	UG/KG	ND	NA	NA	NA
<u>VOLATILES</u>					
CHLOROMETHANE	UG/KG	ND	NA	NA	NA
BROMOMETHANE	UG/KG	ND	NA	NA	NA
VINYL CHLORIDE	UG/KG	ND	NA	NA	NA
CHLOROETHANE	UG/KG	ND	NA	NA	NA
METHYLENE CHLORIDE	UG/KG	1200 J	254.4	528.8	17521.6
ACETONE	UG/KG	4600	979.0	2026.5	1464629.1
CARBON DISULFIDE	UG/KG	35	278.0	571.5	20672.7
1,1-DICHLOROETHENE	UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHANE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHENE	UG/KG	ND	NA	NA	NA
CHLOROFORM	UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHANE	UG/KG	ND	NA	NA	NA
2-BUTANONE	UG/KG	5300	1074.4	2362.2	1001848.0

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>VOLATILES Cont.</u>					
1,1,1-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
CARBON TETRACHLORIDE	UG/KG	ND	NA	NA	NA
BROMODICHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROPROPANE	UG/KG	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
TRICHLOROETHENE	UG/KG	ND	NA	NA	NA
DIBROMOCHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
BENZENE	UG/KG	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
BROMOFORM	UG/KG	ND	NA	NA	NA
4-METHYL-2-PENTANONE	UG/KG	ND	NA	NA	NA
2-HEXANONE	UG/KG	ND	NA	NA	NA
TETRACHLOROETHENE	UG/KG	ND	NA	NA	NA
1,1,1,2-TETRACHLOROETHANE	UG/KG	ND	NA	NA	NA
TOLUENE	UG/KG	ND	NA	NA	NA
CHLOROENZENE	UG/KG	ND	NA	NA	NA
EIHYLBENZENE	UG/KG	ND	NA	NA	NA
STYRENE	UG/KG	ND	NA	NA	NA
TOTAL XYLENES	UG/KG	ND	NA	NA	NA
<u>SEMIVOLATILES</u>					
PHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER	UG/KG	ND	NA	NA	NA
2-CHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,3-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,4-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
2-METHYLPHENOL	UG/KG	ND	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	ND	NA	NA	NA
4-METHYLPHENOL	UG/KG	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE	UG/KG	ND	NA	NA	NA
HEXACHLOROETHANE	UG/KG	ND	NA	NA	NA
NITROBENZENE	UG/KG	ND	NA	NA	NA
ISOPHORONE	UG/KG	ND	NA	NA	NA
2-NITROPHENOL	UG/KG	ND	NA	NA	NA
2,4-DIMETHYLPHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE	UG/KG	ND	NA	NA	NA
2,4-DICHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE	UG/KG	ND	NA	NA	NA
NAPHTHALENE	UG/KG	ND	NA	NA	NA
4-CHLORANILINE	UG/KG	ND	NA	NA	NA
HEXACHLOROBUTADIENE	UG/KG	ND	NA	NA	NA

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES Cont.</u>					
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	NA	NA	NA
2-METHYLNAPHTHALENE	UG/KG	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL	UG/KG	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL	UG/KG	ND	NA	NA	NA
2-CHLORONAPHTHALENE	UG/KG	ND	NA	NA	NA
2-NITROANILINE	UG/KG	ND	NA	NA	NA
DIMETHYL PHTHALATE	UG/KG	ND	NA	NA	NA
ACENAPHTHYLENE	UG/KG	ND	NA	NA	NA
2,6-DINITROTOLUENE	UG/KG	ND	NA	NA	NA
3-NITROANILINE	UG/KG	ND	NA	NA	NA
ACENAPHTHENE	UG/KG	ND	NA	NA	NA
2,4-DINITROPHENOL	UG/KG	ND	NA	NA	NA
4-NITROPHENOL	UG/KG	ND	NA	NA	NA
DIBENZOFURAN	UG/KG	ND	NA	NA	NA
2,4-DINITROTOLUENE	UG/KG	ND	NA	NA	NA
DIETHYL PHTHALATE	UG/KG	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	NA	NA	NA
FLUORENE	UG/KG	ND	NA	NA	NA
4-NITROANILINE	UG/KG	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE	UG/KG	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	NA	NA	NA
HEXACHLOROBENZENE	UG/KG	ND	NA	NA	NA
PENTACHLOROPHENOL	UG/KG	ND	NA	NA	NA
PHENANTHRENE	UG/KG	ND	NA	NA	NA
ANTHRACENE	UG/KG	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE	UG/KG	ND	NA	NA	NA
FLUORANTHENE	UG/KG	ND	NA	NA	NA
CARBAZOLE	UG/KG	ND	NA	NA	NA
PYRENE	UG/KG	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE	UG/KG	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE	UG/KG	ND	NA	NA	NA
BENZO(A)ANTHRACENE	UG/KG	ND	NA	NA	NA
CHRYSENE	UG/KG	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	130 J	543.0	475.6	2345.1
DI-N-OCTYL PHTHALATE	UG/KG	ND	NA	NA	NA
BENZO(B)FLUORANTHENE	UG/KG	ND	NA	NA	NA
BENZO(K)FLUORANTHENE	UG/KG	ND	NA	NA	NA
BENZO(A)PYRENE	UG/KG	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE	UG/KG	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	UG/KG	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE	UG/KG	ND	NA	NA	NA

**APPENDIX P.22**

**SITE 69 EVERETT CREEK SEDIMENT INORGANICS**

---

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC1-SD-06	69-EC3-SD-03	69-EC3-SD-612	69-EC4-SD-062	69-EC4-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	9/16/92	08/20/92	08/20/92	9/14/92	9/14/92
	Lab Id:	00517-21	00424-01	00424-02	00513-01	00513-03
Parameter	Units					
ALUMINUM	MG/KG	8560	32700	23200	888 J	6650
ANTIMONY	MG/KG	8.75 U	4.2 U	4.75 U	1.6 U	2.35 U
ARSENIC	MG/KG	1.85 UJ	5.3 B	4.4 B	1.35 UJ	5.3
BARIUM	MG/KG	13 JB	26.4 B	17.7 B	0.55 UJ	3.5 U
BERYLLIUM	MG/KG	0.93 B	0.96 B	0.7 B	0.13 JB	0.43 JB
CADMIUM	MG/KG	5.2 JB	2.8 BJ	2.2 BJ	0.52 JB	1.8 J
CALCIUM	MG/KG	5500 B	3020	3880	627 JB	1380 JB
CHROMIUM	MG/KG	11.7 B	43.8	29.2	3.6 J	12.1
COBALT	MG/KG	7 JB	3.3 B	2.3 B	0.23 U	1.3 B
COPPER	MG/KG	16.2 JB	11.4 B	6.5 BJ	0.455 UJ	1.7 UJ
IRON	MG/KG	13700	28900	28500	4150 J	12000 J
LEAD	MG/KG	30.8	25.2	11	1.05 UJ	7.5 J
MAGNESIUM	MG/KG	4990 B	7250	5810	313 JB	2000 J
MANGANESE	MG/KG	59.1	83.3	85.9	4.1 J	27.2
MERCURY	MG/KG	0.17 B	0.175 U	0.15 U	0.01 U	0.03 U
NICKEL	MG/KG	4.95 UJ	2.4 U	2.75 U	0.9 U	1.35 U
POTASSIUM	MG/KG	1420 B	4290	3470	129 JB	1050 B
SELENIUM	MG/KG	2.75 U	1.85 U	1.75 U	0.6 U	0.75 U
SILVER	MG/KG	2.8 UJ	1.65 U	1.15 U	0.23 UJ	0.495 UJ
SODIUM	MG/KG	18000	21800	16700	1100 JB	5040 J
THALLIUM	MG/KG	1.1 UJ	0.75 U	0.7 U	0.24 UJ	0.305 UJ
VANADIUM	MG/KG	20.1 B	48.8	29.8 B	7.2 JB	20.4
ZINC	MG/KG	62	57.3	31.8	1.65 UJ	7.85 U

SITE 69 EVERETT CREEK SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO--0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL	
Parameter	Units				
ALUMINUM	MG/KG	32700	14399.60	13125.09	169134.11
ANTIMONY	MG/KG	ND	NA	NA	NA
ARSENIC	MG/KG	5.3 B	3.64	1.91	7.45
BARIUM	MG/KG	26.4 B	12.23	10.53	199.83
BERYLLIUM	MG/KG	0.96 B	0.63	0.35	1.79
CADMIUM	MG/KG	5.2 JB	2.50	1.72	7.07
CALCIUM	MG/KG	5500 B	2881.40	1950.00	8399.51
CHROMIUM	MG/KG	43.8	20.08	16.21	73.95
COBALT	MG/KG	7 JB	2.83	2.60	20.56
COPPER	MG/KG	16.2 JB	7.25	6.61	94.51
IRON	MG/KG	28900	17450.00	10884.16	46531.59
LEAD	MG/KG	30.8	15.11	12.45	125.39
MAGNESIUM	MG/KG	7250	4072.60	2845.45	31839.09
MANGANESE	MG/KG	85.9	51.92	35.67	395.44
MERCURY	MG/KG	0.17 B	0.11	0.08	0.81
NICKEL	MG/KG	ND	NA	NA	NA
POTASSIUM	MG/KG	4290	2071.80	1740.60	24129.27
SELENIUM	MG/KG	ND	NA	NA	NA
SILVER	MG/KG	ND	NA	NA	NA
SODIUM	MG/KG	21800	12528.00	8944.10	91473.75
THALLIUM	MG/KG	ND	NA	NA	NA
VANADIUM	MG/KG	48.8	25.26	15.42	60.04
ZINC	MG/KG	62	32.12	27.59	489.28

**APPENDIX P.23**  
**SITE 69 NEW RIVER SEDIMENT ORGANICS**

---



SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
	Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
BETA-BHC	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
DELTA-BHC	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
GAMMA-BHC(LINDANE)	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
HEPTACHLOR	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
ALDRIN	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
HEPTACHLOR EPOXIDE	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
ENDOSULFAN I	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
DIELDRIN	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
4,4'-DDE	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
ENDRIN	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
ENDOSULFAN II	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
4,4'-DDD	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
ENDOSULFAN SULFATE	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
4,4'-DDT	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
METHOXYCHLOR	UG/KG	11 U	11.5 UJ	11 U	11 U	11 UJ
ENDRIN KETONE	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
ENDRIN ALDEHYDE	UG/KG	2.1 U	2.2 UJ	2.1 U	2.1 U	2.15 UJ
ALPHA CHLORDANE	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
GAMMA CHLORDANE	UG/KG	1.1 U	1.15 UJ	1.1 U	1.1 U	1.1 UJ
TOXAPHENE	UG/KG	110 U	115 UJ	110 U	110 U	110 UJ
PCB-1016	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
PCB-1221	UG/KG	42.5 U	44.5 UJ	43 U	43 U	43 UJ
PCB-1232	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
PCB-1242	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
PCB-1248	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
PCB-1254	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
PCB-1260	UG/KG	21 U	22 UJ	21 U	21 U	21.5 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
BROMOMETHANE	UG/KG	6 U	6.5 UJ	6 UJ	6 U	6.5 U
VINYL CHLORIDE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
CHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
METHYLENE CHLORIDE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
ACETONE	UG/KG	22	6.5 U	6 U	23	120
CARBON DISULFIDE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
1,1-DICHLOROETHENE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
1,1-DICHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
1,2-DICHLOROETHENE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
CHLOROFORM	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
1,2-DICHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U
2-BUTANONE	UG/KG	6 U	6.5 U	6 U	6 U	6.5 U

SITE 69 NEW RIVER SEDIMENT  
STATISTICAL SUMMARY  
REMEDIAL INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
Depth:	N/A	N/A	N/A	N/A	N/A
Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units				
<u>VOLATILES Cont.</u>					
1,1,1-TRICHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U
CARBON TETRACHLORIDE	UG/KG	6 U	6.5 U	6 U	6 U
BROMODICHLOROMETHANE	UG/KG	6 U	6.5 U	6 U	6 U
1,2-DICHLOROPROPANE	UG/KG	6 U	6.5 U	6 U	6 U
CIS-1,3-DICHLOROPROPENE	UG/KG	6 U	6.5 U	6 U	6 U
TRICHLOROETHENE	UG/KG	6 U	6.5 U	6 U	6 U
DIBROMOCHLOROMETHANE	UG/KG	6 U	6.5 U	6 U	6 U
1,1,2-TRICHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U
BENZENE	UG/KG	6 U	6.5 U	6 U	6 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	6 U	6.5 U	6 U	6 U
BROMOFORM	UG/KG	6 U	6.5 U	6 U	6 U
4-METHYL-2-PENTANONE	UG/KG	6 U	6.5 U	6 U	6 U
2-HEXANONE	UG/KG	6 U	6.5 U	6 U	6 U
TETRACHLOROETHENE	UG/KG	6 U	6.5 U	6 U	6 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6 U	6.5 U	6 U	6 U
TOLUENE	UG/KG	6 U	6.5 U	6 U	6 U
CHLOROBENZENE	UG/KG	6 U	6.5 U	6 U	6 U
ETHYLBENZENE	UG/KG	6 U	6.5 U	6 U	6 U
STYRENE	UG/KG	6 U	6.5 U	6 U	6 U
TOTAL XYLENES	UG/KG	6 U	6.5 U	6 U	6 U
<u>SEMIVOLATILES</u>					
PHENOL	UG/KG	210 U	215 U	210 U	210 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	210 U	215 U	210 U	210 U
2-CHLOROPHENOL	UG/KG	210 U	215 U	210 U	210 U
1,3-DICHLOROBENZENE	UG/KG	210 U	215 U	210 U	210 U
1,4-DICHLOROBENZENE	UG/KG	210 U	215 U	210 U	210 U
1,2-DICHLOROBENZENE	UG/KG	210 U	215 U	210 U	210 U
2-METHYLPHENOL	UG/KG	210 U	215 U	210 U	210 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	210 U	215 UJ	210 UJ	210 U
4-METHYLPHENOL	UG/KG	210 U	215 U	210 U	210 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	210 U	215 UJ	210 UJ	210 U
HEXACHLOROETHANE	UG/KG	210 UJ	215 U	210 U	210 UJ
NITROBENZENE	UG/KG	210 U	215 U	210 U	210 U
ISOPHORONE	UG/KG	210 U	215 U	210 U	210 U
2-NITROPHENOL	UG/KG	210 U	215 U	210 U	210 U
2,4-DIMETHYLPHENOL	UG/KG	210 U	215 U	210 U	210 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	210 U	215 U	210 U	210 U
2,4-DICHLOROPHENOL	UG/KG	210 U	215 U	210 U	210 U
1,2,4-TRICHLOROBENZENE	UG/KG	210 U	215 U	210 U	210 U
NAPHTHALENE	UG/KG	210 U	215 U	210 U	210 U
4-CHLORANILINE	UG/KG	210 U	215 U	210 U	210 U
HEXACHLOROBTADIENE	UG/KG	210 U	215 U	210 U	210 U

SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
Depth:	N/A	N/A	N/A	N/A	N/A
Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units				
<u>SEMIVOLATILES Cont.</u>					
4-CHLORO-3-METHYLPHENOL	UG/KG	210 U	215 U	210 U	215 U
2-METHYLNAPHTHALENE	UG/KG	210 U	215 U	210 U	215 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	210 U	215 U	210 U	215 U
2,4,6-TRICHLOROPHENOL	UG/KG	210 U	215 U	210 U	215 U
2,4,5-TRICHLOROPHENOL	UG/KG	500 U	550 U	500 U	500 U
2-CHLORONAPHTHALENE	UG/KG	210 U	215 U	210 U	215 U
2-NITROANILINE	UG/KG	500 U	550 U	500 U	500 U
DIMETHYL PHTHALATE	UG/KG	210 U	215 U	210 U	215 U
ACENAPHTHYLENE	UG/KG	210 U	215 U	210 U	215 U
2,6-DINITROTOLUENE	UG/KG	210 UJ	215 U	210 U	215 UJ
3-NITROANILINE	UG/KG	500 U	550 U	500 U	500 U
ACENAPHTHENE	UG/KG	210 U	215 U	210 U	215 U
2,4-DINITROPHENOL	UG/KG	500 UJ	550 U	500 U	500 UJ
4-NITROPHENOL	UG/KG	500 U	550 U	500 U	500 U
DIBENZOFURAN	UG/KG	210 U	215 U	210 U	215 U
2,4-DINITROTOLUENE	UG/KG	210 UJ	215 U	210 U	215 UJ
DIETHYL PHTHALATE	UG/KG	210 U	215 U	210 U	215 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	210 U	215 U	210 U	215 U
FLUORENE	UG/KG	210 U	215 U	210 U	215 U
4-NITROANILINE	UG/KG	500 U	550 U	500 U	500 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	500 UJ	550 U	500 U	500 UJ
N-NITRISODIPHENYLAMINE	UG/KG	210 U	215 U	210 U	215 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	210 U	215 U	210 U	215 U
HEXACHLOROBENZENE	UG/KG	210 U	215 U	210 U	215 U
PENTACHLOROPHENOL	UG/KG	500 U	550 U	500 U	500 U
PHENANTHRENE	UG/KG	210 U	215 U	210 U	215 U
ANTHRACENE	UG/KG	210 U	215 U	210 U	215 U
DI-N-BUTYL PHTHALATE	UG/KG	210 U	215 U	210 U	215 U
FLUORANTHENE	UG/KG	210 U	215 U	210 U	215 U
CARBAZOLE	UG/KG	210 U	215 U	210 U	215 U
PYRENE	UG/KG	210 U	215 UJ	210 UJ	215 U
BUTYL BENZYL PHTHALATE	UG/KG	210 U	215 U	210 U	215 U
3,3-DICHLOROBENZIDINE	UG/KG	210 U	215 U	210 U	215 U
BENZO(A)ANTHRACENE	UG/KG	210 U	215 U	210 U	215 U
CHRYSENE	UG/KG	210 U	215 U	210 U	215 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	210 U	92 J	47 J	215 U
DI-N-OCTYL PHTHALATE	UG/KG	210 U	215 U	210 U	215 U
BENZO(B)FLUORANTHENE	UG/KG	210 U	215 U	210 U	215 U
BENZO(K)FLUORANTHENE	UG/KG	210 U	215 U	210 U	215 U
BENZO(A)PYRENE	UG/KG	210 U	215 U	210 U	215 U
INDENO(1,2,3-CD) PYRENE	UG/KG	210 U	215 U	210 U	215 U
DIBENZ(A,H)ANTHRACENE	UG/KG	210 U	215 U	210 U	215 U
BENZO(G,H,I)PERYLENE	UG/KG	210 U	215 U	210 U	215 U

SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO--0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC		UG/KG	ND	NA	NA	NA
BETA-BHC		UG/KG	ND	NA	NA	NA
DELTA-BHC		UG/KG	ND	NA	NA	NA
GAMMA-BHC(LINDANE)		UG/KG	ND	NA	NA	NA
HEPTACHLOR		UG/KG	ND	NA	NA	NA
ALDRIN		UG/KG	ND	NA	NA	NA
HEPTACHLOR EPOXIDE		UG/KG	ND	NA	NA	NA
ENDOSULFAN I		UG/KG	ND	NA	NA	NA
DIELDRIN		UG/KG	ND	NA	NA	NA
4,4'-DDE		UG/KG	ND	NA	NA	NA
ENDRIN		UG/KG	ND	NA	NA	NA
ENDOSULFAN II		UG/KG	ND	NA	NA	NA
4,4'-DDD		UG/KG	ND	NA	NA	NA
ENDOSULFAN SULFATE		UG/KG	ND	NA	NA	NA
4,4'-DDT		UG/KG	ND	NA	NA	NA
METHOXYCHLOR		UG/KG	ND	NA	NA	NA
ENDRIN KETONE		UG/KG	ND	NA	NA	NA
ENDRIN ALDEHYDE		UG/KG	ND	NA	NA	NA
ALPHA CHLORDANE		UG/KG	ND	NA	NA	NA
GAMMA CHLORDANE		UG/KG	ND	NA	NA	NA
TOXAPHENE		UG/KG	ND	NA	NA	NA
PCB-1016		UG/KG	ND	NA	NA	NA
PCB-1221		UG/KG	ND	NA	NA	NA
PCB-1232		UG/KG	ND	NA	NA	NA
PCB-1242		UG/KG	ND	NA	NA	NA
PCB-1248		UG/KG	ND	NA	NA	NA
PCB-1254		UG/KG	ND	NA	NA	NA
PCB-1260		UG/KG	ND	NA	NA	NA
<u>VOLATILES</u>						
CHLOROMETHANE		UG/KG	ND	NA	NA	NA
BROMOMETHANE		UG/KG	ND	NA	NA	NA
VINYL CHLORIDE		UG/KG	ND	NA	NA	NA
CHLOROETHANE		UG/KG	ND	NA	NA	NA
METHYLENE CHLORIDE		UG/KG	ND	NA	NA	NA
ACETONE		UG/KG	120	38.0	46.1	192.4
CARBON DISULFIDE		UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHENE		UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHANE		UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHENE		UG/KG	ND	NA	NA	NA
CHLOROFORM		UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHANE		UG/KG	ND	NA	NA	NA
2-BUTANONE		UG/KG	ND	NA	NA	NA

SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE		UG/KG	ND	NA	NA	NA
CARBON TETRACHLORIDE		UG/KG	ND	NA	NA	NA
BROMODICHLOROMETHANE		UG/KG	ND	NA	NA	NA
1,2-DICHLOROPROPANE		UG/KG	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE		UG/KG	ND	NA	NA	NA
TRICHLOROETHENE		UG/KG	ND	NA	NA	NA
DIBROMOCHLOROMETHANE		UG/KG	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE		UG/KG	ND	NA	NA	NA
BENZENE		UG/KG	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE		UG/KG	ND	NA	NA	NA
BROMOFORM		UG/KG	ND	NA	NA	NA
4-METHYL-2-PENTANONE		UG/KG	ND	NA	NA	NA
2-HEXANONE		UG/KG	ND	NA	NA	NA
TETRACHLOROETHENE		UG/KG	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE		UG/KG	ND	NA	NA	NA
TOLUENE		UG/KG	ND	NA	NA	NA
CHLOROENZENE		UG/KG	ND	NA	NA	NA
ETHYLBENZENE		UG/KG	ND	NA	NA	NA
STYRENE		UG/KG	ND	NA	NA	NA
TOTAL XYLENES		UG/KG	ND	NA	NA	NA
<u>SEMIVOLATILES</u>						
PHENOL		UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER		UG/KG	ND	NA	NA	NA
2-CHLOROPHENOL		UG/KG	ND	NA	NA	NA
1,3-DICHLOROBENZENE		UG/KG	ND	NA	NA	NA
1,4-DICHLOROBENZENE		UG/KG	ND	NA	NA	NA
1,2-DICHLOROBENZENE		UG/KG	ND	NA	NA	NA
2-METHYLPHENOL		UG/KG	ND	NA	NA	NA
2,2-OXYBIS(1-CHLOROPROPANE)		UG/KG	ND	NA	NA	NA
4-METHYLPHENOL		UG/KG	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE		UG/KG	ND	NA	NA	NA
HEXACHLOROETHANE		UG/KG	ND	NA	NA	NA
NITROBENZENE		UG/KG	ND	NA	NA	NA
ISOPHORONE		UG/KG	ND	NA	NA	NA
2-NITROPHENOL		UG/KG	ND	NA	NA	NA
2,4-DIMETHYLPHENOL		UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE		UG/KG	ND	NA	NA	NA
2,4-DICHLOROPHENOL		UG/KG	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE		UG/KG	ND	NA	NA	NA
NAPHTHALENE		UG/KG	ND	NA	NA	NA
4-CHLORANILINE		UG/KG	ND	NA	NA	NA
HEXACHLOROBUTADIENE		UG/KG	ND	NA	NA	NA

SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL		UG/KG	ND	NA	NA	NA
2-METHYLNAPHTHALENE		UG/KG	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE		UG/KG	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2-CHLORONAPHTHALENE		UG/KG	ND	NA	NA	NA
2-NITROANILINE		UG/KG	ND	NA	NA	NA
DIMETHYL PHTHALATE		UG/KG	ND	NA	NA	NA
ACENAPHTHYLENE		UG/KG	ND	NA	NA	NA
2,6-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
3-NITROANILINE		UG/KG	ND	NA	NA	NA
ACENAPHTHENE		UG/KG	ND	NA	NA	NA
2,4-DINITROPHENOL		UG/KG	ND	NA	NA	NA
4-NITROPHENOL		UG/KG	ND	NA	NA	NA
DIBENZOFURAN		UG/KG	ND	NA	NA	NA
2,4-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
DIETHYL PHTHALATE		UG/KG	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
FLUORENE		UG/KG	ND	NA	NA	NA
4-NITROANILINE		UG/KG	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL		UG/KG	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE		UG/KG	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
HEXACHLOROBENZENE		UG/KG	ND	NA	NA	NA
PENTACHLOROPHENOL		UG/KG	ND	NA	NA	NA
PHENANTHRENE		UG/KG	ND	NA	NA	NA
ANTHRACENE		UG/KG	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE		UG/KG	ND	NA	NA	NA
FLUORANTHENE		UG/KG	ND	NA	NA	NA
CARBAZOLE		UG/KG	ND	NA	NA	NA
PYRENE		UG/KG	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE		UG/KG	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE		UG/KG	ND	NA	NA	NA
BENZO(A)ANTHRACENE		UG/KG	ND	NA	NA	NA
CHRYSENE		UG/KG	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE		UG/KG	92 J	281.8	194.5	333.2
DI-N-OCTYL PHTHALATE		UG/KG	ND	NA	NA	NA
BENZO(B)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(K)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(A)PYRENE		UG/KG	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE		UG/KG	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE		UG/KG	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE		UG/KG	ND	NA	NA	NA

**APPENDIX P.24**  
**SITE 69 NEW RIVER SEDIMENT INORGANICS**

---

SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-NR1-SD-06	69-NR2-SD-062	69-NR2-SD-6122	69-NR3-SD-06	69-NR3-SD-612
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	08/20/92	9/14/92	9/14/92	08/20/92	08/20/92
	Lab Id:	00424-08	00513-04	00513-05	00424-13	00424-14
Parameter	Units					
ALUMINUM	MG/KG	16200	3450	5870	6360	8100
ANTIMONY	MG/KG	1.6 U	1.85 U	1.6 U	1.7 U	1.4 U
ARSENIC	MG/KG	2	1.35 U	5.6	1.6 B	3.2
BARIUM	MG/KG	12.5 B	2.85 U	3.15 U	5.2 B	4.6 B
BERYLLIUM	MG/KG	0.27 B	0.24 JB	0.37 JB	0.12 U	0.24 B
CADMIUM	MG/KG	0.53 BJ	0.25 U	1.1 JB	0.245 U	1.2 J
CALCIUM	MG/KG	376 B	525 JB	444 JB	388 B	380 B
CHROMIUM	MG/KG	17.7	6.2	10.9	9.8	13.2
COBALT	MG/KG	1.2 B	0.92 B	0.81 JB	0.58 B	1.2 B
COPPER	MG/KG	1.6 BJ	0.95 UJ	1.05 UJ	1.6 BJ	2.5 BJ
IRON	MG/KG	5450	4320 J	11600 J	7470	14500
LEAD	MG/KG	6	4.6 J	5.7 J	3.6	4.4
MAGNESIUM	MG/KG	1120 B	808 JB	856 JB	973 B	1040
MANGANESE	MG/KG	14.5 J	17.2	28.9	13.6 J	19.5
MERCURY	MG/KG	0.06 U	0.015 U	0.015 U	0.055 U	0.065 U
NICKEL	MG/KG	0.9 U	1.05 U	0.9 U	0.95 U	0.8 U
POTASSIUM	MG/KG	1040 B	614 B	698 B	459.5 U	520 U
SELENIUM	MG/KG	0.435 U	0.485 U	0.65 U	0.6 U	0.5 U
SILVER	MG/KG	0.47 U	0.26 UJ	0.28 UJ	0.55 U	0.5 U
SODIUM	MG/KG	2280 J	1710 J	1240 J	1900 J	2560 J
THALLIUM	MG/KG	0.175 U	0.195 UJ	0.26 UJ	0.235 U	0.21 UJ
VANADIUM	MG/KG	35.3	10.3 B	25.4	12.5	18.1
ZINC	MG/KG	7	4.75 U	5.9 U	8.2	10.7



SITE 69 NEW RIVER SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
ALUMINUM	MG/KG	16200	6776.67	1171.94	8595.45
ANTIMONY	MG/KG	ND	NA	NA	NA
ARSENIC	MG/KG	5.6	3.16	1.48	9.68
BARJUM	MG/KG	12.5 B	4.99	1.20	6.43
BERYLLIUM	MG/KG	0.37 JB	0.24	0.09	0.62
CADMIUM	MG/KG	1.2 J	0.71	0.42	4.36
CALCIUM	MG/KG	525 JB	404.00	34.87	455.84
CHROMIUM	MG/KG	17.7	11.30	1.73	14.00
COBALT	MG/KG	1.2 B	0.86	0.31	1.50
COPPER	MG/KG	2.5 BJ	1.83	0.54	3.30
IRON	MG/KG	14500	11190.00	3532.89	18689.26
LEAD	MG/KG	6	4.57	1.06	6.49
MAGNESIUM	MG/KG	1120 B	956.33	93.13	1101.47
MANGANESE	MG/KG	28.9	20.67	7.72	36.53
MERCURY	MG/KG	ND	NA	NA	NA
NICKEL	MG/KG	ND	NA	NA	NA
POTASSIUM	MG/KG	1040 B	727.30	250.04	757.32
SELENIUM	MG/KG	ND	NA	NA	NA
SILVER	MG/KG	ND	NA	NA	NA
SODIUM	MG/KG	2560 J	1900.00	660.00	3300.54
THALLIUM	MG/KG	ND	NA	NA	NA
VANADIUM	MG/KG	35.3	18.67	6.47	31.94
ZINC	MG/KG	10.7	9.22	2.29	13.01

**APPENDIX P.25**  
**SITE 69 UNNAMED TRIBUTARY SEDIMENT ORGANICS**

---

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92
	Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09
Parameter	Units					
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
BETA-BHC	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
DELTA-BHC	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
GAMMA-BHC(LINDANE)	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
HEPTACHLOR	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
ALDRIN	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
HEPTACHLOR EPOXIDE	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
ENDOSULFAN I	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
DIELDRIN	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
4,4'-DDE	UG/KG	2.15 UJ	250	250	10 J	1.95 U
ENDRIN	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
ENDOSULFAN II	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
4,4'-DDD	UG/KG	14 J	150	150	3.1 UJ	1.95 U
ENDOSULFAN SULFATE	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
4,4'-DDT	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
METHOXYCHLOR	UG/KG	11 UJ	60 U	44.5 U	16 UJ	10 U
ENDRIN KETONE	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
ENDRIN ALDEHYDE	UG/KG	2.15 UJ	11.5 U	8.5 U	3.1 UJ	1.95 U
ALPHA CHLORDANE	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
GAMMA CHLORDANE	UG/KG	1.1 UJ	6 U	4.45 U	1.6 UJ	1 U
TOXAPHENE	UG/KG	110 UJ	600 U	445 U	160 UJ	100 U
PCB-1016	UG/KG	21.5 UJ	115 U	85 U	31 UJ	19.5 U
PCB-1221	UG/KG	43.5 UJ	235 U	175 U	65 UJ	39.5 U
PCB-1232	UG/KG	21.5 UJ	115 U	85 U	31 UJ	19.5 U
PCB-1242	UG/KG	21.5 UJ	115 U	85 U	31 UJ	19.5 U
PCB-1248	UG/KG	21.5 UJ	115 U	85 U	31 UJ	19.5 U
PCB-1254	UG/KG	21.5 UJ	115 U	85 U	31 UJ	19.5 U
PCB-1260	UG/KG	21.5 UJ	115 U	85 U	31 UJ	360
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
BROMOMETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 UJ	10.5 UJ
VINYL CHLORIDE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
CHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
METHYLENE CHLORIDE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
ACETONE	UG/KG	39 J	185 UJ	43 UJ	41	65
CARBON DISULFIDE	UG/KG	6 U	88	25 J	18 J	46
1,1-DICHLOROETHENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
1,1-DICHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
1,2-DICHLOROETHENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
CHLOROFORM	UG/KG	6 U	38.5 UJ	16.5 UJ	9.5 U	10.5 U
1,2-DICHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
2-BUTANONE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92	
Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09	
Parameter	Units					
<u>VOLATILES (Continued)</u>						
1,1,1-TRICHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
CARBON TETRACHLORIDE	UG/KG	6 U	38.5 UJ	16.5 UJ	9.5 U	10.5 U
BROMODICHLOROMETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
1,2-DICHLOROPROPANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
CIS-1,3-DICHLOROPROPENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
TRICHLOROETHENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
DIBROMOCHLOROMETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
1,1,2-TRICHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
BENZENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
BROMOFORM	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
4-METHYL-2-PENTANONE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
2-HEXANONE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
TETRACHLOROETHENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
TOLUENE	UG/KG	2 J	38.5 U	16.5 U	9.5 U	10.5 U
CHLOROENZENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
ETHYLBENZENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
STYRENE	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
TOTAL XYLENES	UG/KG	6 U	38.5 U	16.5 U	9.5 U	10.5 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	215 U	1150 U	850 U	310 U	195 U
2-CHLOROPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
1,3-DICHLOROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
1,4-DICHLOROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
1,2-DICHLOROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2-METHYLPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	215 U	1150 U	850 U	310 UJ	195 UJ
4-METHYLPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	215 U	1150 U	850 U	310 UJ	195 UJ
HEXACHLOROETHANE	UG/KG	215 U	1150 U	850 U	310 U	195 U
NITROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
ISOPHORONE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2-NITROPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4-DIMETHYLPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4-DICHLOROPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
1,2,4-TRICHLOROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
NAPHTHALENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
4-CHLORANILINE	UG/KG	215 U	1150 U	850 U	310 U	195 U
HEXACHLOROBUTADIENE	UG/KG	215 U	1150 U	850 U	310 U	195 U

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122	
Depth:	N/A	N/A	N/A	N/A	N/A	
Date Sampled:	8/22/92	8/20/92	8/20/92	9/14/92	9/14/92	
Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09	
Parameter	Units					
<u>SEMIVOLATILES (Continued)</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
2-METHYLNAPHTHALENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4,6-TRICHLOROPHENOL	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4,5-TRICHLOROPHENOL	UG/KG	500 U	2850 U	2100 U	750 U	475 U
2-CHLORONAPHTHALENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2-NITROANILINE	UG/KG	500 U	2850 U	2100 U	750 U	475 U
DIMETHYL PHTHALATE	UG/KG	215 U	1150 U	850 U	310 U	195 U
ACENAPHTHYLENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,6-DINITROTOLUENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
3-NITROANILINE	UG/KG	500 U	2850 U	2100 U	750 U	475 U
ACENAPHTHENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4-DINITROPHENOL	UG/KG	500 U	2850 U	2100 U	750 U	475 U
4-NITROPHENOL	UG/KG	500 U	2850 U	2100 U	750 U	475 U
DIBENZOFURAN	UG/KG	215 U	1150 U	850 U	310 U	195 U
2,4-DINITROTOLUENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
DIETHYL PHTHALATE	UG/KG	215 U	1150 U	500 J	310 U	195 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	215 U	1150 U	850 U	310 U	195 U
FLUORENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
4-NITROANILINE	UG/KG	500 U	2850 U	2100 U	750 U	475 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	500 U	2850 U	2100 U	750 U	475 U
N-NITRISODIPHENYLAMINE	UG/KG	215 U	1150 U	850 U	310 U	195 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	215 U	1150 U	850 U	310 U	195 U
HEXACHLOROBENZENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
PENTACHLOROPHENOL	UG/KG	500 U	2850 U	2100 U	750 U	475 U
PHENANTHRENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
ANTHRACENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
DI-N-BUTYL PHTHALATE	UG/KG	215 U	1150 U	850 U	310 U	195 U
FLUORANTHENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
CARBAZOLE	UG/KG	215 U	1150 U	850 U	310 U	195 U
PYRENE	UG/KG	215 U	1150 U	850 U	310 UJ	195 UJ
BUTYL BENZYL PHTHALATE	UG/KG	215 U	1150 U	850 U	310 U	195 U
3,3-DICHLOROBENZIDINE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BENZO(A)ANTHRACENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
CHRYSENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	215 U	1150 U	850 U	81 J	52 J
DI-N-OCTYL PHTHALATE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BENZO(B)FLUORANTHENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BENZO(K)FLUORANTHENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BENZO(A)PYRENE	UG/KG	215 U	290 J	2500	310 U	195 U
INDENO(1,2,3-CD) PYRENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
DIBENZ(A,H)ANTHRACENE	UG/KG	215 U	1150 U	850 U	310 U	195 U
BENZO(G,H,I)PERYLENE	UG/KG	215 U	1150 U	850 U	310 U	195 U

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO -0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBs</u>						
ALPHA-BHC		UG/KG	ND	NA	NA	NA
BETA-BHC		UG/KG	ND	NA	NA	NA
DELTA-BHC		UG/KG	ND	NA	NA	NA
GAMMA-BHC(LINDANE)		UG/KG	ND	NA	NA	NA
HEPTACHLOR		UG/KG	ND	NA	NA	NA
ALDRIN		UG/KG	ND	NA	NA	NA
HEPTACHLOR EPOXIDE		UG/KG	ND	NA	NA	NA
ENDOSULFAN I		UG/KG	ND	NA	NA	NA
DIELDRIN		UG/KG	ND	NA	NA	NA
4,4'-DDE		UG/KG	250	102.82	134.40	101741.06
ENDRIN		UG/KG	ND	NA	NA	NA
ENDOSULFAN II		UG/KG	ND	NA	NA	NA
4,4'-DDD		UG/KG	150	63.81	78.82	4662.40
ENDOSULFAN SULFATE		UG/KG	ND	NA	NA	NA
4,4'-DDT		UG/KG	ND	NA	NA	NA
METHOXYCHLOR		UG/KG	ND	NA	NA	NA
ENDRIN KETONE		UG/KG	ND	NA	NA	NA
ENDRIN ALDEHYDE		UG/KG	ND	NA	NA	NA
ALPHA CHLORDANE		UG/KG	ND	NA	NA	NA
GAMMA CHLORDANE		UG/KG	ND	NA	NA	NA
TOXAPHENE		UG/KG	ND	NA	NA	NA
PCB-1016		UG/KG	ND	NA	NA	NA
PCB-1221		UG/KG	ND	NA	NA	NA
PCB-1232		UG/KG	ND	NA	NA	NA
PCB-1242		UG/KG	ND	NA	NA	NA
PCB-1248		UG/KG	ND	NA	NA	NA
PCB-1254		UG/KG	ND	NA	NA	NA
PCB-1260		UG/KG	360	122.50	138.24	509.85
<u>VOLATILES</u>						
CHLOROMETHANE		UG/KG	ND	NA	NA	NA
BROMOMETHANE		UG/KG	ND	NA	NA	NA
VINYL CHLORIDE		UG/KG	ND	NA	NA	NA
CHLOROETHANE		UG/KG	ND	NA	NA	NA
METHYLENE CHLORIDE		UG/KG	ND	NA	NA	NA
ACETONE		UG/KG	65	74.60	62.60	146.37
CARBON DISULFIDE		UG/KG	88	36.60	32.20	141.91
1,1-DICHLOROETHENE		UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHANE		UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHENE		UG/KG	ND	NA	NA	NA
CHLOROFORM		UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHANE		UG/KG	ND	NA	NA	NA
2-BUTANONE		UG/KG	ND	NA	NA	NA

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
<u>VOLATILES (Continued)</u>					
1,1,1-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
CARBON TETRACHLORIDE	UG/KG	ND	NA	NA	NA
BROMODICHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROPROPANE	UG/KG	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
TRICHLOROETHENE	UG/KG	ND	NA	NA	NA
DIBROMOCHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
BENZENE	UG/KG	ND	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
BROMOFORM	UG/KG	ND	NA	NA	NA
4-METHYL-2-PENTANONE	UG/KG	ND	NA	NA	NA
2-HEXANONE	UG/KG	ND	NA	NA	NA
TETRACHLOROETHENE	UG/KG	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	UG/KG	ND	NA	NA	NA
TOLUENE	UG/KG	2 J	15.40	13.90	66.13
CHLOROENZENE	UG/KG	ND	NA	NA	NA
ETHYLBENZENE	UG/KG	ND	NA	NA	NA
STYRENE	UG/KG	ND	NA	NA	NA
TOTAL XYLENES	UG/KG	ND	NA	NA	NA
<u>SEMIVOLATILES</u>					
PHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER	UG/KG	ND	NA	NA	NA
2-CHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,3-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,4-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
2-METHYLPHENOL	UG/KG	ND	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	ND	NA	NA	NA
4-METHYLPHENOL	UG/KG	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE	UG/KG	ND	NA	NA	NA
HEXACHLOROETHANE	UG/KG	ND	NA	NA	NA
NITROBENZENE	UG/KG	ND	NA	NA	NA
ISOPHORONE	UG/KG	ND	NA	NA	NA
2-NITROPHENOL	UG/KG	ND	NA	NA	NA
2,4-DIMETHYLPHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE	UG/KG	ND	NA	NA	NA
2,4-DICHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE	UG/KG	ND	NA	NA	NA
NAPHTHALENE	UG/KG	ND	NA	NA	NA
4-CHLORANILINE	UG/KG	ND	NA	NA	NA
HEXACHLOROBUTADIENE	UG/KG	ND	NA	NA	NA

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES (Continued)</u>						
4-CHLORO-3-METHYLPHENOL		UG/KG	ND	NA	NA	NA
2-METHYLNAPHTHALENE		UG/KG	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE		UG/KG	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2-CHLORONAPHTHALENE		UG/KG	ND	NA	NA	NA
2-NITROANILINE		UG/KG	ND	NA	NA	NA
DIMETHYL PHTHALATE		UG/KG	ND	NA	NA	NA
ACENAPHTHYLENE		UG/KG	ND	NA	NA	NA
2,6-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
3-NITROANILINE		UG/KG	ND	NA	NA	NA
ACENAPHTHENE		UG/KG	ND	NA	NA	NA
2,4-DINITROPHENOL		UG/KG	ND	NA	NA	NA
4-NITROPHENOL		UG/KG	ND	NA	NA	NA
DIBENZOFURAN		UG/KG	ND	NA	NA	NA
2,4-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
DIETHYL PHTHALATE		UG/KG	500 J	474.00	396.70	1103.47
4-CHLOROPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
FLUORENE		UG/KG	ND	NA	NA	NA
4-NITROANILINE		UG/KG	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL		UG/KG	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE		UG/KG	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
HEXACHLOROBENZENE		UG/KG	ND	NA	NA	NA
PENTACHLOROPHENOL		UG/KG	ND	NA	NA	NA
PHENANTHRENE		UG/KG	ND	NA	NA	NA
ANTHRACENE		UG/KG	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE		UG/KG	ND	NA	NA	NA
FLUORANTHENE		UG/KG	ND	NA	NA	NA
CARBAZOLE		UG/KG	ND	NA	NA	NA
PYRENE		UG/KG	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE		UG/KG	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE		UG/KG	ND	NA	NA	NA
BENZO(A)ANTHRACENE		UG/KG	ND	NA	NA	NA
CHRYSENE		UG/KG	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE		UG/KG	81 J	469.60	499.47	3555.86
DI-N-OCTYL PHTHALATE		UG/KG	ND	NA	NA	NA
BENZO(B)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(K)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(A)PYRENE		UG/KG	2500	702.00	1006.28	2357.37
INDENO(1,2,3-CD) PYRENE		UG/KG	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE		UG/KG	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE		UG/KG	ND	NA	NA	NA



**APPENDIX P.26**

**SITE 69 UNNAMED TRIBUTARY SEDIMENT INORGANICS**

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-UT1-SD-06	69-UT2-SD-06	69-UT2-SD-612	69-UT3-SD-062	69-UT3-SD-6122
	Depth:	N/A	N/A	N/A	N/A	N/A
	Date Sampled:	8/21/92	8/21/92	8/21/92	9/14/92	9/14/92
	Lab Id:	00428-01	00425-01	00425-02	00513-08	00513-09
Parameter	Units					
ALUMINUM	MG/KG	1240	16700	23400	11200	14500
ANTIMONY	MG/KG	4.7 U	6.8 UJ	6.65 UJ	2.75 U	2.55 U
ARSENIC	MG/KG	0.31 U	4.7 B	5.2 B	5.9	7.1
BARIUM	MG/KG	2 U	14.2 B	23.1 B	5.1 U	6.25 U
BERYLLIUM	MG/KG	0.095 U	0.485 U	0.475 U	0.52 JB	0.61 JB
CADMIUM	MG/KG	0.29 U	0.95 U	2.1 JB	2.1 J	1.8 JB
CALCIUM	MG/KG	264 B	6270	5750	1360 JB	1280 JB
CHROMIUM	MG/KG	3.3	7.9 U	12.75 U	17.7	22.4
COBALT	MG/KG	0.6 UJ	0.95 U	1.2 U	1.4 B	2.1 B
COPPER	MG/KG	0.75 UJ	22.8 B	24.1	7.2 B	8.5 B
CYANIDE	MG/KG	1.05 U				
IRON	MG/KG	3530	16200	17900	12100 J	15700 J
LEAD	MG/KG	1	32.8	34.1	12.8 J	19.4 J
MAGNESIUM	MG/KG	48.9 B	6660	6670	2600 J	3180 J
MANGANESE	MG/KG	2.9 J	54.4	69.3	27	26.6
MERCURY	MG/KG	0.055 U	0.27 U	0.24 U	0.03 U	0.025 U
NICKEL	MG/KG	1.65 U	3.9 U	3.8 U	1.55 U	1.45 U
POTASSIUM	MG/KG	81.1 B	1385 U	1370 U	1560 B	2040
SELENIUM	MG/KG	0.5 U	2.2 U	2.25 U	0.85 U	0.75 U
SILVER	MG/KG	0.95 U	2.15 U	3.2 U	0.7 UJ	0.7 UJ
SODIUM	MG/KG	122 JB	21100	16800	6740 J	7330 J
THALLIUM	MG/KG	0.21 UJ	0.9 UJ	0.9 UJ	0.345 UJ	0.295 UJ
VANADIUM	MG/KG	2 UJ	32.3 B	41.1 B	25.8	36.8
ZINC	MG/KG	2.2 U	30.5 U	27.9 U	22.4	24.6

SITE 69 UNNAMED TRIBUTARY SEDIMENT  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
Parameter	Units				
ALUMINUM	MG/KG	23400	16366.67	6310.57	87921.64
ANTIMONY	MG/KG	ND	NA	NA	NA
ARSENIC	MG/KG	7.1	3.89	3.06	39.36
BARIIUM	MG/KG	23.1 B	10.19	7.93	35.97
BERYLLIUM	MG/KG	0.61 JB	0.55	0.28	1.16
CADMIUM	MG/KG	2.1 JB	1.70	0.64	4.19
CALCIUM	MG/KG	6270	2796.67	2557.97	21537.91
CHROMIUM	MG/KG	22.4	18.83	5.12	32.76
COBALT	MG/KG	2.1 B	1.66	0.55	2.11
COPPER	MG/KG	24.1	8.56	9.26	153.38
CYANIDE	MG/KG	ND	NA	NA	NA
IRON	MG/KG	17900	15233.33	2928.03	28247.50
LEAD	MG/KG	34.1	22.10	10.90	281.28
MAGNESIUM	MG/KG	6670	4150.00	2201.57	443598.44
MANGANESE	MG/KG	69.3	40.97	24.54	264.15
MERCURY	MG/KG	ND	NA	NA	NA
NICKEL	MG/KG	ND	NA	NA	NA
POTASSIUM	MG/KG	2040	2096.00	649.33	11431.78
SELENIUM	MG/KG	ND	NA	NA	NA
SILVER	MG/KG	ND	NA	NA	NA
SODIUM	MG/KG	21100	10290.00	5645.54	2039465.82
THALLIUM	MG/KG	ND	NA	NA	NA
VANADIUM	MG/KG	41.1 B	22.34	17.65	219.36
ZINC	MG/KG	24.6	28.06	20.55	107.71

**APPENDIX P.27**  
**SITE 69 ECOLOGICAL SAMPLES ORGANICS**

---

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
BETA-BHC	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
DELTA-BHC	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
GAMMA-BHC(LINDANE)	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
HEPTACHLOR	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
ALDRIN	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
HEPTACHLOR EPOXIDE	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
ENDOSULFAN I	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
DIELDRIN	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
4,4'-DDE	UG/KG	9.9 J	12 J	8.2	7.9 J	12 J
ENDRIN	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
ENDOSULFAN II	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
4,4'-DDD	UG/KG	3.7 J	5.4 J	3.3 J	1 UJ	2.2 J
ENDOSULFAN SULFATE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
4,4'-DDT	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
METHOXYCHLOR	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ
ENDRIN KETONE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
ENDRIN ALDEHYDE	UG/KG	1 UJ	1 UJ	1 U	1 UJ	1 UJ
ALPHA CHLORDANE	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
GAMMA CHLORDANE	UG/KG	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
TOXAPHENE	UG/KG	50 UJ	50 UJ	50 U	50 UJ	50 UJ
PCB-1016	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
PCB-1221	UG/KG	20 UJ	20 UJ	20 U	20 UJ	20 UJ
PCB-1232	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
PCB-1242	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
PCB-1248	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
PCB-1254	UG/KG	10 UJ	10 UJ	10 U	10 UJ	10 UJ
PCB-1260	UG/KG	10 UJ	10 UJ	68	10 UJ	10 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
BROMOMETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ
VINYL CHLORIDE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
CHLOROETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
METHYLENE CHLORIDE	UG/KG	69 J	5 UJ	9 J	28 J	8 J
ACETONE	UG/KG	370 J	1300 J	110	760 J	220 J
CARBON DISULFIDE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
1,1-DICHLOROETHENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
1,1-DICHLOROETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
1,2-DICHLOROETHENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
CHLOROFORM	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
1,2-DICHLOROETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U
2-BUTANONE	UG/KG	5 UJ	5 UJ	18	5 UJ	15

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
	Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
	Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
	Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units						
<u>VOLATILES Cont.</u>							
1,1,1-TRICHLOROETHANE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
CARBON TETRACHLORIDE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
BROMODICHLOROMETHANE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
1,2-DICHLOROPROPANE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
CIS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
TRICHLOROETHENE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
DIBROMOCHLOROMETHANE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
1,1,2-TRICHLOROETHANE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
BENZENE	UG/KG	2 J	11 J	2 J	79 J	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
BROMOFORM	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
4-METHYL-2-PENTANONE	UG/KG	5 U	5 UJ	5 U	5 UJ	5 U	5 U
2-HEXANONE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
TETRACHLOROETHENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
TOLUENE	UG/KG	5 UJ	6 J	1 J	39 J	1 J	5 U
CHLOROBENZENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
ETHYLBENZENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
STYRENE	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
TOTAL XYLENES	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2-CHLOROPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
1,3-DICHLOROBENZENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
1,4-DICHLOROBENZENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
1,2-DICHLOROBENZENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2-METHYLPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
4-METHYLPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
HEXACHLOROETHANE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
NITROBENZENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
ISOPHORONE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2-NITROPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4-DIMETHYLPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4-DICHLOROPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
1,2,4-TRICHLOROBENZENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
NAPHTHALENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
4-CHLORANILINE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U
HEXACHLOROBUTADIENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U	24.5 U

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units					
<u>SEMI-VOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	25 UJ	24.5 UJ	24.5 U	24.5 UJ	24.5 U
2-METHYLNAPHTHALENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4,6-TRICHLOROPHENOL	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4,5-TRICHLOROPHENOL	UG/KG	60 U	60 U	60 U	60 U	60 U
2-CHLORONAPHTHALENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
DIMETHYL PHTHALATE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
ACENAPHTHYLENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2,6-DINITROTOLUENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
3-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
ACENAPHTHENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4-DINITROPHENOL	UG/KG	60 U	60 U	60 UJ	60 U	60 U
4-NITROPHENOL	UG/KG	60 U	60 UJ	60 U	60 U	60 U
DIBENZOFURAN	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
2,4-DINITROTOLUENE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 U
DIETHYL PHTHALATE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
FLUORENE	UG/KG	25 U	24.5 U	24.5 U	24.5 U	24.5 U
4-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	60 U	60 U	60 UJ	60 U	60 UJ
N-NITRISODIPHENYLAMINE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
4-BROMOPHENYL PHENYL ETHER	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
HEXACHLOROBENZENE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
PENTACHLOROPHENOL	UG/KG	60 U	60 U	60 UJ	60 U	60 UJ
PHENANTHRENE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
ANTHRACENE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
DI-N-BUTYL PHTHALATE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
FLUORANTHENE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
CARBAZOLE	UG/KG	25 U	24.5 U	24.5 UJ	24.5 U	24.5 UJ
PYRENE	UG/KG	25 UJ	24.5 U	24.5 UJ	24.5 UJ	24.5 UJ
BUTYL BENZYL PHTHALATE	UG/KG	25 UJ	24.5 U	24.5 UJ	24.5 UJ	24.5 UJ
3,3-DICHLOROBENZIDINE	UG/KG	25 UJ	24.5 U	24.5 UJ	24.5 UJ	24.5 UJ
BENZO(A)ANTHRACENE	UG/KG	25 UJ	24.5 U	24.5 UJ	24.5 UJ	24.5 UJ
CHRYSENE	UG/KG	25 UJ	24.5 U	24.5 UJ	24.5 UJ	24.5 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	190 UJ	41 U	95 UJ	45 UJ	34 UJ
DI-N-OCTYL PHTHALATE	UG/KG	25 UJ	24.5 UJ	120 J	24.5 UJ	24.5 UJ
BENZO(B)FLUORANTHENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ
BENZO(K)FLUORANTHENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ
BENZO(A)PYRENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ
BENZO(G,H,I)PERYLENE	UG/KG	25 UJ	24.5 UJ	24.5 UJ	24.5 UJ	24.5 UJ

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
BETA-BHC	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
DELTA-BHC	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
GAMMA-BHC(LINDANE)	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
HEPTACHLOR	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
ALDRIN	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
HEPTACHLOR EPOXIDE	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
ENDOSULFAN I	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
DIELDRIN	UG/KG	4.9 U	1 UJ	1 UJ	0.95 UJ	0.95 U
4,4'-DDE	UG/KG	280	4.2 J	6.9 J	12 J	4
ENDRIN	UG/KG	39 J	1 UJ	1 UJ	1 UJ	0.95 UJ
ENDOSULFAN II	UG/KG	4.9 U	1 UJ	1 UJ	1 UJ	0.95 UJ
4,4'-DDD	UG/KG	150 J	1.9 J	6.4 J	2.3 J	0.95 U
ENDOSULFAN SULFATE	UG/KG	4.9 U	1 UJ	1 UJ	1 UJ	0.95 UJ
4,4'-DDT	UG/KG	4.9 U	1 UJ	1 UJ	1 UJ	0.95 UJ
METHOXYCHLOR	UG/KG	25 U	5 UJ	5 UJ	5 UJ	5 U
ENDRIN KETONE	UG/KG	4.9 U	1 UJ	1 UJ	1 UJ	0.95 UJ
ENDRIN ALDEHYDE	UG/KG	4.9 U	1 UJ	1 UJ	1 UJ	0.95 UJ
ALPHA CHLORDANE	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
GAMMA CHLORDANE	UG/KG	2.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
TOXAPHENE	UG/KG	250 U	50 UJ	50 UJ	50 UJ	50 U
PCB-1016	UG/KG	49 U	10 UJ	10 UJ	10 UJ	9.5 UJ
PCB-1221	UG/KG	100 U	20 UJ	20 UJ	20 UJ	19.5 UJ
PCB-1232	UG/KG	49 U	10 UJ	10 UJ	10 UJ	9.5 UJ
PCB-1242	UG/KG	49 U	10 UJ	10 UJ	10 UJ	9.5 UJ
PCB-1248	UG/KG	49 U	10 UJ	10 UJ	10 UJ	9.5 UJ
PCB-1254	UG/KG	340 J	10 UJ	10 UJ	10 UJ	9.5 UJ
PCB-1260	UG/KG	49 U	10 UJ	10 UJ	10 UJ	9.5 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
BROMOMETHANE	UG/KG	5 UJ	5 U	5 U	5 UJ	5 U
VINYL CHLORIDE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
CHLOROETHANE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
METHYLENE CHLORIDE	UG/KG	7 J	6 J	18	8 J	12
ACETONE	UG/KG	5 U	5 U	42	66	460 J
CARBON DISULFIDE	UG/KG	5 U	5 U	5 U	5 U	5 UJ
1,1-DICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
1,1-DICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
1,2-DICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
CHLOROFORM	UG/KG	5 U	5 U	5 U	5 UJ	5 U
1,2-DICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 UJ	5 U
2-BUTANONE	UG/KG	19	10	5 U	7 J	35 J



SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

	Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
	Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
	Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
	Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units						
<u>VOLATILES Cont.</u>							
1,1,1-TRICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
CARBON TETRACHLORIDE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
BROMODICHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
1,2-DICHLOROPROPANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
CIS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
TRICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
DIBROMOCHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
1,1,2-TRICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
BENZENE	UG/KG	5 U	5 U	5 U	5 U	36 J	2 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
BROMOFORM	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
4-METHYL-2-PENTANONE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 U
2-HEXANONE	UG/KG	38	73	16	5 U	5 UJ	5 UJ
TETRACHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
TOLUENE	UG/KG	5 U	5 U	5 U	5 U	13 J	14 J
CHLOROBENZENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
ETHYLBENZENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
STYRENE	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
TOTAL XYLENES	UG/KG	5 U	5 U	5 U	5 U	5 UJ	5 UJ
<u>SEMIVOLATILES</u>							
PHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
2-CHLOROPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
1,3-DICHLOROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
1,4-DICHLOROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
1,2-DICHLOROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
2-METHYLPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	220	24.5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
4-METHYLPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
HEXACHLOROETHANE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
NITROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
ISOPHORONE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
2-NITROPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
2,4-DIMETHYLPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
2,4-DICHLOROPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
1,2,4-TRICHLOROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
NAPHTHALENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
4-CHLORANILINE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U
HEXACHLOROBUTADIENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U	24.5 U

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/14/92	9/11/92
Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units					
<u>SEMIVOLATILES Cont</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2-METHYLNAPHTHALENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2,4,6-TRICHLOROPHENOL	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2,4,5-TRICHLOROPHENOL	UG/KG	60 U	60 U	60 U	60 U	60 U
2-CHLORONAPHTHALENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
DIMETHYL PHTHALATE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
ACENAPHTHYLENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2,6-DINITROTOLUENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
3-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
ACENAPHTHENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2,4-DINITROPHENOL	UG/KG	60 U	60 U	60 U	60 UJ	60 U
4-NITROPHENOL	UG/KG	60 U	60 U	60 U	60 U	60 U
DIBENZOFURAN	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
2,4-DINITROTOLUENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
DIETHYL PHTHALATE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
FLUORENE	UG/KG	24.5 U	24.5 U	24.5 U	24 U	24.5 U
4-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	60 U	60 U	60 U	60 UJ	60 U
N-NITRISODIPHENYLAMINE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
HEXACHLOROBENZENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
PENTACHLOROPHENOL	UG/KG	60 U	60 U	60 U	60 UJ	60 U
PHENANTHRENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
ANTHRACENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
DI-N-BUTYL PHTHALATE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
FLUORANTHENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
CARBAZOLE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 U
PYRENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 UJ
BUTYL BENZYL PHTHALATE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 UJ
3,3-DICHLOROBENZIDINE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 UJ
BENZO(A)ANTHRACENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 UJ
CHRYSENE	UG/KG	24.5 U	24.5 U	24.5 U	24 UJ	24.5 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	27 U	24.5 U	80 U	130 UJ	70 U
DI-N-OCTYL PHTHALATE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
BENZO(B)FLUORANTHENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
BENZO(K)FLUORANTHENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
BENZO(A)PYRENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ
BENZO(G,H,I)PERYLENE	UG/KG	24.5 UJ	24.5 U	24.5 U	24 UJ	24.5 UJ

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units					
<u>PESTICIDE/PCBS</u>						
ALPHA-BHC	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
BETA-BHC	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
DELTA-BHC	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
GAMMA-BHC(LINDANE)	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
HEPTACHLOR	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
ALDRIN	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
HEPTACHLOR EPOXIDE	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
ENDOSULFAN I	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
DIELDRIN	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
4,4'-DDE	UG/KG	11 J	2.5 J	7.8 J	3.2	2.6 J
ENDRIN	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
ENDOSULFAN II	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
4,4'-DDD	UG/KG	3.5 J	1 U	3.6 J	0.95 U	1 UJ
ENDOSULFAN SULFATE	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
4,4'-DDT	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
METHOXYCHLOR	UG/KG	5 UJ	5 U	5 UJ	5 U	5 UJ
ENDRIN KETONE	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
ENDRIN ALDEHYDE	UG/KG	1 UJ	1 U	1 UJ	0.95 U	1 UJ
ALPHA CHLORDANE	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
GAMMA CHLORDANE	UG/KG	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
TOXAPHENE	UG/KG	50 UJ	50 U	50 UJ	50 U	50 UJ
PCB-1016	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
PCB-1221	UG/KG	20 UJ	20 U	20 UJ	19.5 U	20 UJ
PCB-1232	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
PCB-1242	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
PCB-1248	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
PCB-1254	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
PCB-1260	UG/KG	10 UJ	10 U	10 UJ	9.5 U	10 UJ
<u>VOLATILES</u>						
CHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	UG/KG	5 UJ	5 U	5 U	5 U	5 U
VINYL CHLORIDE	UG/KG	5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	UG/KG	4 J	5 U	3 J	20	5 U
ACETONE	UG/KG	5 U	24	15	450 J	20
CARBON DISULFIDE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 U
CHLOROFORM	UG/KG	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
2-BUTANONE	UG/KG	5 U	5 U	5 U	27	5 U

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units					
<u>VOLATILES Cont.</u>						
1,1,1-TRICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	UG/KG	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	UG/KG	5 U	5 U	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
BENZENE	UG/KG	5 U	5 U	5 U	5 U	2 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	5 U	5 U	5 U	5 U	5 U
BROMOFORM	UG/KG	5 U	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	UG/KG	5 U	5 U	5 U	5 U	5 U
2-HEXANONE	UG/KG	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	UG/KG	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5 U	5 U	5 U	5 U	5 U
TOLUENE	UG/KG	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	UG/KG	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	UG/KG	5 U	5 U	5 U	5 U	5 U
STYRENE	UG/KG	5 U	5 U	5 U	5 U	5 U
TOTAL XYLENES	UG/KG	5 U	5 U	5 U	5 U	5 U
<u>SEMIVOLATILES</u>						
PHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2-CHLOROPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
1,3-DICHLOROBENZENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
1,4-DICHLOROBENZENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
1,2-DICHLOROBENZENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2-METHYLPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
4-METHYLPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
HEXACHLOROETHANE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
NITROBENZENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
ISOPHORONE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2-NITROPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4-DIMETHYLPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4-DICHLOROPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
1,2,4-TRICHLOROBENZENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
NAPHTHALENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
4-CHLORANILINE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
HEXACHLOROBUTADIENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U

SITE 69 ECOLOGICAL SAMPLES  
STATISTICAL SUMMARY  
REMEDIATION INVESTIGATION CTO-0133  
MCB CAMP LEJEUNE, NORTH CAROLINA  
ORGANICS

Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units					
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2-METHYLNAPHTHALENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4,6-TRICHLOROPHENOL	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4,5-TRICHLOROPHENOL	UG/KG	60 U	60 U	60 U	60 U	60 U
2-CHLORONAPHTHALENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
DIMETHYL PHTHALATE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
ACENAPHTHYLENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,6-DINITROTOLUENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
3-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
ACENAPHTHENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4-DINITROPHENOL	UG/KG	60 UJ	60 U	60 U	60 U	60 U
4-NITROPHENOL	UG/KG	60 U	60 U	60 U	60 U	60 U
DIBENZOFURAN	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
2,4-DINITROTOLUENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 U
DIETHYL PHTHALATE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
FLUORENE	UG/KG	24 U	24.5 U	24.5 U	24.5 U	25 U
4-NITROANILINE	UG/KG	60 U	60 U	60 U	60 U	60 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	60 UJ	60 U	60 U	60 U	60 UJ
N-NITRISODIPHENYLAMINE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
4-BROMOPHENYL PHENYL ETHER	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
HEXACHLOROBENZENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
PENTACHLOROPHENOL	UG/KG	60 UJ	60 U	60 U	60 U	60 UJ
PHENANTHRENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
ANTHRACENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
DI-N-BUTYL PHTHALATE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
FLUORANTHENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
CARBAZOLE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 U	25 UJ
PYRENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 UJ	25 UJ
BUTYL BENZYL PHTHALATE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 UJ	25 UJ
3,3-DICHLOROBENZIDINE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 UJ	25 UJ
BENZO(A)ANTHRACENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 UJ	25 UJ
CHRYSENE	UG/KG	24 UJ	24.5 U	24.5 U	24.5 UJ	25 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	490 UJ	260 U	285 U	235 UJ	25 UJ
DI-N-OCTYL PHTHALATE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
BENZO(B)FLUORANTHENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
BENZO(K)FLUORANTHENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
BENZO(A)PYRENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
INDENO(1,2,3-CD) PYRENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
DIBENZ(A,H)ANTHRACENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ
BENZO(G,H,I)PERYLENE	UG/KG	24 UJ	24.5 UJ	24.5 UJ	24.5 UJ	25 UJ

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units		
<u>PESTICIDE/PCBS</u>			
ALPHA-BHC	UG/KG	0.5 UJ	0.5 UJ
BETA-BHC	UG/KG	0.5 UJ	0.5 UJ
DELTA-BHC	UG/KG	0.5 UJ	0.5 UJ
GAMMA-BHC(LINDANE)	UG/KG	0.5 UJ	0.5 UJ
HEPTACHLOR	UG/KG	0.5 UJ	0.5 UJ
ALDRIN	UG/KG	0.5 UJ	0.5 UJ
HEPTACHLOR EPOXIDE	UG/KG	0.5 UJ	0.5 UJ
ENDOSULFAN I	UG/KG	0.5 UJ	0.5 UJ
DIELDRIN	UG/KG	1 UJ	1 UJ
4,4'-DDE	UG/KG	3.7 J	3.3 J
ENDRIN	UG/KG	1 UJ	1 UJ
ENDOSULFAN II	UG/KG	1 UJ	1 UJ
4,4'-DDD	UG/KG	1 UJ	1 UJ
ENDOSULFAN SULFATE	UG/KG	1 UJ	1 UJ
4,4'-DDT	UG/KG	1 UJ	1 UJ
METHOXYCHLOR	UG/KG	5 UJ	5 UJ
ENDRIN KETONE	UG/KG	1 UJ	1 UJ
ENDRIN ALDEHYDE	UG/KG	1 UJ	1 UJ
ALPHA CHLORDANE	UG/KG	0.5 UJ	0.5 UJ
GAMMA CHLORDANE	UG/KG	0.5 UJ	0.5 UJ
TOXAPHENE	UG/KG	50 UJ	50 UJ
PCB-1016	UG/KG	10 UJ	10 UJ
PCB-1221	UG/KG	20 UJ	20 UJ
PCB-1232	UG/KG	10 UJ	10 UJ
PCB-1242	UG/KG	10 UJ	10 UJ
PCB-1248	UG/KG	10 UJ	10 UJ
PCB-1254	UG/KG	10 UJ	10 UJ
PCB-1260	UG/KG	10 UJ	10 UJ
<u>VOLATILES</u>			
CHLOROMETHANE	UG/KG		5 UJ
BROMOMETHANE	UG/KG		5 UJ
VINYL CHLORIDE	UG/KG		5 UJ
CHLOROETHANE	UG/KG		5 UJ
METHYLENE CHLORIDE	UG/KG		5 UJ
ACETONE	UG/KG	200 J	
CARBON DISULFIDE	UG/KG		5 UJ
1,1-DICHLOROETHENE	UG/KG		5 UJ
1,1-DICHLOROETHANE	UG/KG		5 UJ
1,2-DICHLOROETHENE	UG/KG		5 UJ
CHLOROFORM	UG/KG		5 UJ
1,2-DICHLOROETHANE	UG/KG		5 UJ
2-BUTANONE	UG/KG		5 UJ

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units	
<u>VOLATILES Cont.</u>		
1,1,1-TRICHLOROETHANE	UG/KG	5 UJ
CARBON TETRACHLORIDE	UG/KG	5 UJ
BROMODICHLOROMETHANE	UG/KG	5 UJ
1,2-DICHLOROPROPANE	UG/KG	5 UJ
CIS-1,3-DICHLOROPROPENE	UG/KG	5 UJ
TRICHLOROETHENE	UG/KG	5 UJ
DIBROMOCHLOROMETHANE	UG/KG	5 UJ
1,1,2-TRICHLOROETHANE	UG/KG	5 UJ
BENZENE	UG/KG	22 J
TRANS-1,3-DICHLOROPROPENE	UG/KG	5 UJ
BROMOFORM	UG/KG	5 UJ
4-METHYL-2-PENTANONE	UG/KG	5 UJ
2-HEXANONE	UG/KG	5 UJ
TETRACHLOROETHENE	UG/KG	5 UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	5 UJ
TOLUENE	UG/KG	9 J
CHLOROBENZENE	UG/KG	5 UJ
ETHYLBENZENE	UG/KG	5 UJ
STYRENE	UG/KG	5 UJ
TOTAL XYLENES	UG/KG	5 UJ
<u>SEMIVOLATILES</u>		
PHENOL	UG/KG	25 U
BIS(2-CHLOROETHYL) ETHER	UG/KG	25 U
2-CHLOROPHENOL	UG/KG	25 U
1,3-DICHLOROBENZENE	UG/KG	25 U
1,4-DICHLOROBENZENE	UG/KG	25 U
1,2-DICHLOROBENZENE	UG/KG	25 U
2-METHYLPHENOL	UG/KG	25 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	25 U
4-METHYLPHENOL	UG/KG	25 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	25 U
HEXACHLOROETHANE	UG/KG	25 U
NITROBENZENE	UG/KG	25 U
ISOPHORONE	UG/KG	25 U
2-NITROPHENOL	UG/KG	25 U
2,4-DIMETHYLPHENOL	UG/KG	25 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	25 U
2,4-DICHLOROPHENOL	UG/KG	25 U
1,2,4-TRICHLOROBENZENE	UG/KG	25 U
NAPHTHALENE	UG/KG	25 U
4-CHLORANILINE	UG/KG	25 U
HEXACHLOROBUTADIENE	UG/KG	25 U

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Sample No:	69-NR3-SP	69-NR3-US
Depth:	N/A	(US1&2)
Date Sampled:	9/14/92	9/14/92
Lab Id:	00523-01	00523-02

Parameter	Units	
<u>SEMIVOLATILES Cont.</u>		
4-CHLORO-3-METHYLPHENOL	UG/KG	25 U
2-METHYLNAPHTHALENE	UG/KG	25 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	25 U
2,4,6-TRICHLOROPHENOL	UG/KG	25 U
2,4,5-TRICHLOROPHENOL	UG/KG	60 U
2-CHLORONAPHTHALENE	UG/KG	25 U
2-NITROANILINE	UG/KG	60 U
DIMETHYL PHTHALATE	UG/KG	25 U
ACENAPHTHYLENE	UG/KG	25 U
2,6-DINITROTOLUENE	UG/KG	25 U
3-NITROANILINE	UG/KG	60 U
ACENAPHTHENE	UG/KG	25 U
2,4-DINITROPHENOL	UG/KG	60 U
4-NITROPHENOL	UG/KG	60 U
DIBENZOFURAN	UG/KG	25 U
2,4-DINITROTOLUENE	UG/KG	25 U
DIETHYL PHTHALATE	UG/KG	25 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	25 U
FLUORENE	UG/KG	25 U
4-NITROANILINE	UG/KG	60 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	60 U
N-NITRISODIPHENYLAMINE	UG/KG	25 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	25 U
HEXACHLOROBENZENE	UG/KG	25 U
PENTACHLOROPHENOL	UG/KG	60 U
PHENANTHRENE	UG/KG	25 U
ANTHRACENE	UG/KG	25 U
DI-N-BUTYL PHTHALATE	UG/KG	25 U
FLUORANTHENE	UG/KG	25 U
CARBAZOLE	UG/KG	25 U
PYRENE	UG/KG	25 U
BUTYL BENZYL PHTHALATE	UG/KG	25 U
3,3-DICHLOROBENZIDINE	UG/KG	25 U
BENZO(A)ANTHRACENE	UG/KG	25 U
CHRYSENE	UG/KG	25 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	36.5 U
DI-N-OCTYL PHTHALATE	UG/KG	25 U
BENZO(B)FLUORANTHENE	UG/KG	25 U
BENZO(K)FLUORANTHENE	UG/KG	25 U
BENZO(A)PYRENE	UG/KG	25 U
INDENO(1,2,3-CD) PYRENE	UG/KG	25 U
DIBENZ(A,H)ANTHRACENE	UG/KG	25 U
BENZO(G,H,I)PERYLENE	UG/KG	25 U



SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>PESTICIDE/PCBS</u>					
ALPHA-BHC	UG/KG	ND	NA	NA	NA
BETA-BHC	UG/KG	ND	NA	NA	NA
DELTA-BHC	UG/KG	ND	NA	NA	NA
GAMMA-BHC(LINDANE)	UG/KG	ND	NA	NA	NA
HEPTACHLOR	UG/KG	ND	NA	NA	NA
ALDRIN	UG/KG	ND	NA	NA	NA
HEPTACHLOR EPOXIDE	UG/KG	ND	NA	NA	NA
ENDOSULFAN I	UG/KG	ND	NA	NA	NA
DIELDRIN	UG/KG	ND	NA	NA	NA
4,4'-DDE	UG/KG	280	21.3	61.1	16.6
ENDRIN	UG/KG	39 J	2.9	8.5	2.0
ENDOSULFAN II	UG/KG	ND	NA	NA	NA
4,4'-DDD	UG/KG	150 J	10.1	33.0	6.5
ENDOSULFAN SULFATE	UG/KG	ND	NA	NA	NA
4,4'-DDT	UG/KG	ND	NA	NA	NA
METHOXYCHLOR	UG/KG	ND	NA	NA	NA
ENDRIN KETONE	UG/KG	ND	NA	NA	NA
ENDRIN ALDEHYDE	UG/KG	ND	NA	NA	NA
ALPHA CHLORDANE	UG/KG	ND	NA	NA	NA
GAMMA CHLORDANE	UG/KG	ND	NA	NA	NA
TOXAPHENE	UG/KG	ND	NA	NA	NA
PCB-1016	UG/KG	ND	NA	NA	NA
PCB-1221	UG/KG	ND	NA	NA	NA
PCB-1232	UG/KG	ND	NA	NA	NA
PCB-1242	UG/KG	ND	NA	NA	NA
PCB-1248	UG/KG	ND	NA	NA	NA
PCB-1254	UG/KG	340 J	26.4	73.8	19.4
PCB-1260	UG/KG	68	14.8	15.3	16.0
<u>VOLATILES</u>					
CHLOROMETHANE	UG/KG	ND	NA	NA	NA
BROMOMETHANE	UG/KG	ND	NA	NA	NA
VINYL CHLORIDE	UG/KG	ND	NA	NA	NA
CHLOROETHANE	UG/KG	ND	NA	NA	NA
METHYLENE CHLORIDE	UG/KG	69 J	12.7	15.3	14.5
ACETONE	UG/KG	1300 J	238.5	334.8	469.7
CARBON DISULFIDE	UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHENE	UG/KG	ND	NA	NA	NA
1,1-DICHLOROETHANE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHENE	UG/KG	ND	NA	NA	NA
CHLOROFORM	UG/KG	ND	NA	NA	NA
1,2-DICHLOROETHANE	UG/KG	ND	NA	NA	NA
2-BUTANONE	UG/KG	49 J	12.4	12.4	14.4

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id: Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>VOLATILES Cont.</u>					
1,1,1-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
CARBON TETRACHLORIDE	UG/KG	ND	NA	NA	NA
BROMODICHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROPROPANE	UG/KG	ND	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
TRICHLOROETHENE	UG/KG	ND	NA	NA	NA
DIBROMOCHLOROMETHANE	UG/KG	ND	NA	NA	NA
1,1,2-TRICHLOROETHANE	UG/KG	ND	NA	NA	NA
BENZENE	UG/KG	79 J	11.0	18.4	11.6
TRANS-1,3-DICHLOROPROPENE	UG/KG	ND	NA	NA	NA
BROMOFORM	UG/KG	ND	NA	NA	NA
4-METHYL-2-PENTANONE	UG/KG	ND	NA	NA	NA
2-HEXANONE	UG/KG	73	10.9	17.0	11.1
TETRACHLOROETHENE	UG/KG	ND	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	UG/KG	ND	NA	NA	NA
TOLUENE	UG/KG	39 J	7.4	8.3	8.9
CHLOROENZENE	UG/KG	ND	NA	NA	NA
ETHYLBENZENE	UG/KG	ND	NA	NA	NA
STYRENE	UG/KG	ND	NA	NA	NA
TOTAL XYLENES	UG/KG	ND	NA	NA	NA
<u>SEMIVOLATILES</u>					
PHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHYL) ETHER	UG/KG	ND	NA	NA	NA
2-CHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,3-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,4-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
1,2-DICHLOROBENZENE	UG/KG	ND	NA	NA	NA
2-METHYLPHENOL	UG/KG	220	34.8	44.8	36.4
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	ND	NA	NA	NA
4-METHYLPHENOL	UG/KG	ND	NA	NA	NA
N-NITROSODI-N-PROPYLAMINE	UG/KG	ND	NA	NA	NA
HEXACHLOROETHANE	UG/KG	ND	NA	NA	NA
NITROBENZENE	UG/KG	ND	NA	NA	NA
ISOPHORONE	UG/KG	ND	NA	NA	NA
2-NITROPHENOL	UG/KG	ND	NA	NA	NA
2,4-DIMETHYLPHENOL	UG/KG	ND	NA	NA	NA
BIS(2-CHLOROETHOXY) METHANE	UG/KG	ND	NA	NA	NA
2,4-DICHLOROPHENOL	UG/KG	ND	NA	NA	NA
1,2,4-TRICHLOROBENZENE	UG/KG	ND	NA	NA	NA
NAPHTHALENE	UG/KG	ND	NA	NA	NA
4-CHLORANILINE	UG/KG	ND	NA	NA	NA
HEXACHLOROBUTADIENE	UG/KG	ND	NA	NA	NA

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 ORGANICS

Parameter	Sample No: Depth: Date Sampled: Lab Id:	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
<u>SEMIVOLATILES Cont.</u>						
4-CHLORO-3-METHYLPHENOL		UG/KG	ND	NA	NA	NA
2-METHYLNAPHTHALENE		UG/KG	ND	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE		UG/KG	ND	NA	NA	NA
2,4,6-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2,4,5-TRICHLOROPHENOL		UG/KG	ND	NA	NA	NA
2-CHLORONAPHTHALENE		UG/KG	ND	NA	NA	NA
2-NITROANILINE		UG/KG	ND	NA	NA	NA
DIMETHYL PHTHALATE		UG/KG	ND	NA	NA	NA
ACENAPHTHYLENE		UG/KG	ND	NA	NA	NA
2,6-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
3-NITROANILINE		UG/KG	ND	NA	NA	NA
ACENAPHTHENE		UG/KG	ND	NA	NA	NA
2,4-DINITROPHENOL		UG/KG	ND	NA	NA	NA
4-NITROPHENOL		UG/KG	ND	NA	NA	NA
DIBENZOFURAN		UG/KG	ND	NA	NA	NA
2,4-DINITROTOLUENE		UG/KG	ND	NA	NA	NA
DIETHYL PHTHALATE		UG/KG	ND	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
FLUORENE		UG/KG	ND	NA	NA	NA
4-NITROANILINE		UG/KG	ND	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL		UG/KG	ND	NA	NA	NA
N-NITRISODIPHENYLAMINE		UG/KG	ND	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER		UG/KG	ND	NA	NA	NA
HEXACHLOROBENZENE		UG/KG	ND	NA	NA	NA
PENTACHLOROPHENOL		UG/KG	ND	NA	NA	NA
PHENANTHRENE		UG/KG	ND	NA	NA	NA
ANTHRACENE		UG/KG	ND	NA	NA	NA
DI-N-BUTYL PHTHALATE		UG/KG	ND	NA	NA	NA
FLUORANTHENE		UG/KG	ND	NA	NA	NA
CARBAZOLE		UG/KG	ND	NA	NA	NA
PYRENE		UG/KG	ND	NA	NA	NA
BUTYL BENZYL PHTHALATE		UG/KG	ND	NA	NA	NA
3,3-DICHLOROBENZIDINE		UG/KG	ND	NA	NA	NA
BENZO(A)ANTHRACENE		UG/KG	ND	NA	NA	NA
CHRYSENE		UG/KG	ND	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE		UG/KG	ND	NA	NA	NA
DI-N-OCTYL PHTHALATE		UG/KG	120 J	29.6	21.9	32.1
BENZO(B)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(K)FLUORANTHENE		UG/KG	ND	NA	NA	NA
BENZO(A)PYRENE		UG/KG	ND	NA	NA	NA
INDENO(1,2,3-CD) PYRENE		UG/KG	ND	NA	NA	NA
DIBENZ(A,H)ANTHRACENE		UG/KG	ND	NA	NA	NA
BENZO(G,H,I)PERYLENE		UG/KG	ND	NA	NA	NA

**APPENDIX P.28**  
**SITE 69 ECOLOGICAL SAMPLES INORGANICS**

---

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC3-BC	69-EC3-FL	69-EC4-CR	69-EC4-FL1	69-EC4-FL2	69-EC4-OY
	Depth:	(BC1&2)	(FL1&2)	(CR1-4)	N/A	N/A	N/A
	Date Sampled:	9/14/92	9/11/92	9/10/92	9/11/92	9/11/92	9/13/92
	Lab Id:	00523-12	00523-05	00523-31	00523-04	00523-22	00524-24
Parameter	Units						
ALUMINUM	MG/KG	22 U	1.25 U	14.9 U	0.6 U	1.25 U	64.5 UJ
ANTIMONY	MG/KG	0.08 UJ	0.105 UJ	0.06 UJ	0.085 UJ	0.065 UJ	0.035 UJ
ARSENIC	MG/KG	1.6 U	0.18 UJ	0.325 UJ	0.29 UJ	0.7 U	0.45 UJ
BARIUM	MG/KG	1.95 UJ	0.08 UJ	0.195 UJ	0.04 UJ	0.115 UJ	0.13 UJ
BERYLLIUM	MG/KG	0.0005 U	0.004 B	0.0005 U	0.01 B	0.001 U	0.001 JB
CADMIUM	MG/KG	0.015 U	0.01 U	0.01 U	0.01 U	0.015 U	0.11 B
CALCIUM	MG/KG	35600 J	4850 J	11800 J	1720 J	12600 J	1600
CHROMIUM	MG/KG	0.165 U	0.185 U	0.345 U	0.14 U	0.265 U	0.43 UJ
COBALT	MG/KG	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.06 UJ
COPPER	MG/KG	2.25 UJ	0.225 UJ	0.195 UJ	0.145 UJ	0.155 UJ	1.3 UJ
IRON	MG/KG	19.6 UJ	6.4 UJ	15.55 UJ	3.45 UJ	4.45 UJ	68.5 UJ
LEAD	MG/KG	0.035 UJ	0.005 UJ	0.015 UJ	0.005 UJ	0.005 UJ	0.09 UJ
MAGNESIUM	MG/KG	2180	344	378	310	482	494
MANGANESE	MG/KG	2.5 UJ	0.38 UJ	0.43 UJ	0.145 UJ	1.35 UJ	1.05 U
MERCURY	MG/KG	0.015 UJ	0.005 UJ	0.005 UJ	0.01 UJ	0.015 UJ	0.015 UJ
NICKEL	MG/KG	0.07 UJ	0.06 UJ	0.08 UJ	0.03 UJ	0.05 UJ	0.2 UJ
POTASSIUM	MG/KG	2420	3240	2470	3870	3620	617 J
SELENIUM	MG/KG	0.45	0.14 B	0.26	0.29	0.17 B	0.25 J
SILVER	MG/KG	0.28	0.0025 UJ	0.0025 UJ	0.0025 UJ	0.005 UJ	0.1 J
SODIUM	MG/KG	3730	1010	1100	755	1250	2310
THALLIUM	MG/KG	0.37 UJ	0.07 UJ	0.07 UJ	0.075 UJ	0.075 UJ	0.005 UJ
VANADIUM	MG/KG	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.13 UJ
ZINC	MG/KG	26.5	11.2	15	4.15 U	16.4	239

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-EC4-SM1	69-NR1-AM	69-NR1-CR	69-NR1-SP	69-NR2-AM	69-NR2-CR
	Depth:	N/A	(AM1&2)	(CR1&2)	N/A	N/A	(CR1&2)
	Date Sampled:	9/10/92	9/11/92	9/11/92	9/14/92	9/11/92	9/11/92
	Lab Id:	00524-13	00524-05	00524-02	00523-10	00523-03	00523-23
Parameter	Units						
ALUMINUM	MG/KG	3.2 UJ	362 J	15.15 UJ	30.55 U	49.3 U	9.9 U
ANTIMONY	MG/KG	0.035 UJ	0.035 UJ	0.035 UJ	0.04 UJ	0.05 UJ	0.045 UJ
ARSENIC	MG/KG	0.19 U	0.475 UJ	0.355 UJ	0.55 UJ	0.9 UJ	0.475 UJ
BARIUM	MG/KG	0.405 UJ	0.27 UJ	0.22 UJ	1.3 UJ	0.35 UJ	0.165 UJ
BERYLLIUM	MG/KG	0.0005 UJ	0.01 JB	0.0005 UJ	0.001 U	0.01 B	0.0005 U
CADMIUM	MG/KG	0.015 UJ	0.015 U	0.015 U	0.015 U	0.015 U	0.01 U
CALCIUM	MG/KG	3010	12100	16300	10000 J	12200 J	13600 J
CHROMIUM	MG/KG	0.41 UJ	0.6 UJ	1.2 UJ	0.7 U	0.37 U	0.325 U
COBALT	MG/KG	0.015 UJ	0.035 UJ	0.025 UJ	0.015 U	0.03 U	0.01 U
COPPER	MG/KG	0.255 UJ	0.5 UJ	0.195 UJ	0.18 UJ	0.265 UJ	0.23 UJ
IRON	MG/KG	9.95 UJ	217 J	22.55 UJ	31 UJ	35.55 UJ	10.4 UJ
LEAD	MG/KG	0.01 UJ	0.295 UJ	0.015 UJ	0.07 UJ	0.225 UJ	0.01 UJ
MAGNESIUM	MG/KG	299	450	475	415	448	392
MANGANESE	MG/KG	0.16 U	1.1 U	0.75 U	1.3 UJ	1.85 UJ	0.55 UJ
MERCURY	MG/KG	0.005 UJ	0.005 UJ	0.005 UJ	0.0015 UJ	0.005 UJ	0.005 UJ
NICKEL	MG/KG	0.08 UJ	0.135 UJ	0.415 UJ	0.235 UJ	0.055 UJ	0.06 UJ
POTASSIUM	MG/KG	3270	2270	2650	2540	2690	2580
SELENIUM	MG/KG	0.025 U	0.21	0.51 J	0.21 B	0.22 B	0.37
SILVER	MG/KG	0.02 JB	0.07 J	0.02 JB	0.01 JB	0.01 JB	0.0025 UJ
SODIUM	MG/KG	1100	1240 J	1440 J	1430 J	1380 J	1460 J
THALLIUM	MG/KG	0.01 UJ	0.01 UJ	0.03 JB	0.075 UJ	0.075 UJ	0.075 UJ
VANADIUM	MG/KG	0.005 UJ	0.24 UJ	0.035 UJ	0.05 UJ	0.285 UJ	0.005 UJ
ZINC	MG/KG	4.65 U	20.2	13.9	18.1	17.7	12.9

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

	Sample No:	69-NR2-OY	69-NR2-SM1	69-NR2-SM2	69-NR3-CR	69-NR3-OY	69-NR3-SM1
	Depth:	N/A	N/A	N/A	(CR1-4)	N/A	N/A
	Date Sampled:	9/13/92	9/11/92	9/11/92	9/10/92	9/13/92	9/10/92
	Lab Id:	00524-26	00524-22	00524-19	00523-28	00524-25	00524-08
Parameter	Units						
ALUMINUM	MG/KG	303 J	1.9 UJ	0.7 UJ	6.85 U	77 UJ	208 J
ANTIMONY	MG/KG	0.035 UJ	0.035 UJ	0.04 UJ	0.08 UJ	0.035 UJ	0.05 UJ
ARSENIC	MG/KG	0.65 U	0.28 U	0.305 U	0.6 UJ	0.6 U	0.55 U
BARIUM	MG/KG	0.235 UJ	0.225 UJ	0.16 UJ	0.15 UJ	0.135 UJ	0.6 UJ
BERYLLIUM	MG/KG	0.01 JB	0.0005 UJ	0.001 UJ	0.001 U	0.01 JB	0.005 JB
CADMIUM	MG/KG	0.22	0.015 UJ	0.015 U	0.015 U	0.12 B	0.015 U
CALCIUM	MG/KG	1190	997	603	12600 J	1640	7080
CHROMIUM	MG/KG	1.05 UJ	0.175 UJ	0.18 UJ	0.295 U	0.45 UJ	1.85 UJ
COBALT	MG/KG	0.085 UJ	0.02 UJ	0.01 UJ	0.02 U	0.065 UJ	0.045 UJ
COPPER	MG/KG	3.45 UJ	0.185 UJ	0.145 UJ	0.12 UJ	2.4 UJ	0.48 UJ
IRON	MG/KG	131.5 UJ	5.85 UJ	4.45 UJ	9.5 UJ	78 UJ	194 J
LEAD	MG/KG	0.13 UJ	0.01 UJ	0.01 UJ	0.005 UJ	0.09 UJ	0.085 UJ
MAGNESIUM	MG/KG	540	285	268	369	496	373
MANGANESE	MG/KG	1.4 U	0.135 U	0.085 U	0.6 UJ	1.4 U	1 U
MERCURY	MG/KG	0.005 UJ	0.005 UJ	0.01 UJ	0.005 UJ	0.01 UJ	0.005 UJ
NICKEL	MG/KG	0.46 UJ	0.055 UJ	0.04 UJ	0.06 UJ	0.23 UJ	0.8 UJ
POTASSIUM	MG/KG	742	3680	3580	2510	822	1930
SELENIUM	MG/KG	0.4 J	0.025 UJ	0.025 UJ	0.47	0.34 J	0.12 B
SILVER	MG/KG	0.11 J	0.01 JB	UR	0.005 UJ	0.14 J	0.03 J
SODIUM	MG/KG	2420 J	693 J	663 J	1390 J	2540 J	1030 J
THALLIUM	MG/KG	0.01 UJ	0.01 UJ	0.01 UJ	0.075 UJ	0.01 UJ	0.075 UJ
VANADIUM	MG/KG	0.265 UJ	0.01 UJ	0.005 UJ	0.005 UJ	0.15 UJ	0.18 UJ
ZINC	MG/KG	312	9.9	3.9 U	12.6	189	13.8

SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Sample No: 69-NR3-US  
 Depth: (US1&2)  
 Date Sampled: 9/14/92  
 Lab Id: 00523-02

Parameter	Units	
ALUMINUM	MG/KG	1.4 U
ANTIMONY	MG/KG	0.06 UJ
ARSENIC	MG/KG	0.9 U
BARIUM	MG/KG	0.125 UJ
BERYLLIUM	MG/KG	0.001 U
CADMIUM	MG/KG	0.015 U
CALCIUM	MG/KG	4470 J
CHROMIUM	MG/KG	0.155 U
COBALT	MG/KG	0.005 UJ
COPPER	MG/KG	0.165 UJ
IRON	MG/KG	6.45 UJ
LEAD	MG/KG	0.005 UJ
MAGNESIUM	MG/KG	313
MANGANESE	MG/KG	0.345 UJ
MERCURY	MG/KG	0.005 UJ
NICKEL	MG/KG	0.03 UJ
POTASSIUM	MG/KG	3450
SELENIUM	MG/KG	0.14 B
SILVER	MG/KG	0.005 UJ
SODIUM	MG/KG	1040 J
THALLIUM	MG/KG	0.075 UJ
VANADIUM	MG/KG	0.005 UJ
ZINC	MG/KG	4.65 U



SITE 69 ECOLOGICAL SAMPLES  
 STATISTICAL SUMMARY  
 REMEDIAL INVESTIGATION CTO-0133  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 TOTAL METALS

Parameter	Units	MAXIMUM DETECTED	NORMAL ARITHMETIC MEAN	NORMAL STANDARD DEVIATION	LOG-NORMAL UPPER 95% CONFIDENCE INTERVAL
ALUMINUM	MG/KG	362 J	61.761	107.548	107.758
ANTIMONY	MG/KG	ND	NA	NA	NA
ARSENIC	MG/KG	ND	NA	NA	NA
BARIUM	MG/KG	ND	NA	NA	NA
BERYLLIUM	MG/KG	0.01 B	0.004	0.004	0.005
CADMIUM	MG/KG	0.22	0.035	0.055	0.036
CALCIUM	MG/KG	35600 J	8629.474	8395.776	12420.737
CHROMIUM	MG/KG	ND	NA	NA	NA
COBALT	MG/KG	ND	NA	NA	NA
COPPER	MG/KG	ND	NA	NA	NA
IRON	MG/KG	217 J	46.008	65.150	56.653
LEAD	MG/KG	ND	NA	NA	NA
MAGNESIUM	MG/KG	2180	490.053	417.083	536.818
MANGANESE	MG/KG	ND	NA	NA	NA
MERCURY	MG/KG	ND	NA	NA	NA
NICKEL	MG/KG	ND	NA	NA	NA
POTASSIUM	MG/KG	3870	2576.368	986.746	3146.106
SELENIUM	MG/KG	0.51 J	0.243	0.150	0.352
SILVER	MG/KG	0.28	0.046	0.072	0.061
SODIUM	MG/KG	3730	1472.684	767.715	1681.854
THALLIUM	MG/KG	0.03 JB	0.063	0.081	0.086
VANADIUM	MG/KG	ND	NA	NA	NA
ZINC	MG/KG	312	49.766	90.180	49.859

**APPENDIX Q**  
**CHRONIC DAILY INTAKE ESTIMATIONS**

**EXAMPLE SOIL INGESTION CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from ingestion of soil

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{C \times CF \times EF \times ED \times IR}{BW \times AT}$$

Where:

C	=	Contaminant concentration in soil (mg/kg)
CF	=	Conversion factor (kg/mg)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
IR	=	Ingestion rate (mg/day)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kg}\cdot\text{day)} \times \text{CSF (mg/kg}\cdot\text{day)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kg}\cdot\text{day)} / \text{RfD (mg/kg}\cdot\text{day)} \end{aligned}$$

**Example Carcinogen: 4,4'-DDD**

$$\begin{aligned} \text{Intake (mg/kg}\cdot\text{day)} &= \frac{0.0108 \text{ mg/kg} \times 100 \text{ mg/day} \times 350 \text{ days/yr} \times 24 \text{ yrs} \times 1.0\text{E-}6 \text{ kg/mg}}{70 \text{ kg} \times 25,550 \text{ days}} \\ &= 5\text{E-}09 \end{aligned}$$

$$\text{Risk} = 5\text{E-}09 \text{ mg/kg}\cdot\text{day} \times 2.4\text{E-}01 \text{ mg/kg}\cdot\text{day}^{-1} = 1\text{E-}09$$

**Example Noncarcinogen: 4,4'-DDT**

$$\begin{aligned} \text{Intake (mg/kg}\cdot\text{day)} &= \frac{0.0134 \text{ mg/kg} \times 100 \text{ mg/day} \times 350 \text{ days/yr} \times 24 \text{ yrs} \times 1.0\text{E-}6 \text{ kg/mg}}{70 \text{ kg} \times 8,760 \text{ days}} \\ &= 2\text{E-}08 \end{aligned}$$

$$\text{Risk} = \frac{2\text{E-}08 \text{ mg/kg}\cdot\text{day}}{5\text{E-}04 \text{ mg/kg}\cdot\text{day}} = 0.00004$$

**Re: Site 41 Future Residential Adult**

SOIL INGESTION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL CHILD

Intake from ingestion of soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * EF * ED * IR/BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * \text{CSF or } RfD$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	
CF = conversion for kg to mg	1E-06
EF = child exposure frequency (days/yr)	350
ED = child exposure duration (yr)	6
IR = child soil ingestion rate (mg/day)	200
BW = child body weight (kg)	15
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	6
DY = days per year (days/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Exposure Frequency (days/yr) Child	Exposure Duration (yr) Child	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Child	Body Weight (kg) Child	Average Carc Time (years)	Days per year (days/yr)	Carc Dose (mg/kg/day) Child	Slope Factor (mg/kg/day) <sup>-1</sup>	Carcinogenic Risk Child	Percent Carcinogenic Risk Child
No Carcinogenic Compounds	0	350	6	1E-06	200	15	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
Selected as COPCs	0	350	6	1E-06	200	15	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL											0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Exposure Frequency (days/yr) Child	Exposure Duration (yr) Child	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Child	Body Weight (kg) Child	Average Noncarc Time (years)	Days per year (days/yr)	Noncarc Dose (mg/kg/day) Child	Reference Dose (mg/kg/day)	Noncarcinogenic Risk Child	Percent Noncarcinogenic Risk Child
No Carcinogenic Compounds	0	350	6	1E-06	200	15	6	365	0.00E+00	7.00E-02	0.00E+00	ERR
Selected as COPCs	0	350	6	1E-06	200	15	6	365	0.00E+00	5.00E-03	0.00E+00	ERR
TOTAL											0.00E+00	ERR

File Name: SI.WQ1

SOIL INGESTION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL ADULT

Intake from ingestion of soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * EF * ED * IR/BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * \text{CSF or /RfD}$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	
CF = conversion for kg to mg	1E-06
EF = adult exposure frequency (days/yr)	350
ED = adult exposure duration (yr)	24
IR = adult soil ingestion rate (mg/day)	100
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	24
DY = days per year (days/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (days/yr)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg/day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
No Carcinogenic Compounds	0	350	24	1E-06	100	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
Selected as COPCs	0	350	24	1E-06	100	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL											0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (days/yr)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg/day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
No Noncarcinogenic Compounds	0	350	24	1E-06	100	70	24	365	0.00E+00	7.00E-02	0.00E+00	ERR
Selected as COPCs	0	350	24	1E-06	100	70	24	365	0.00E+00	5.00E-03	0.00E+00	ERR
TOTAL											0.00E+00	ERR

File Name: SI.WQ2

SOIL INGESTION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 CURRENT MILITARY PERSONNEL

Intake from ingestion of soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * EF * ED * IR / BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:

INPUTS

C = contaminant concentration in soil (mg/kg)	
CF = conversion for kg to mg	1E-06
EF = adult exposure frequency (days/yr)	350
ED = adult exposure duration (yr)	4
IR = adult soil ingestion rate (mg/day)	100
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	4
DY = days per year (days/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (days/yr)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg/day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
No Carcinogenic Compounds Selected as COPCs	0	350	4	1E-06	100	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL	0	350	4	1E-06	100	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (days/yr)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg/day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
No Noncarcinogenic Compounds Selected as COPCs	0	350	4	1E-06	100	70	4	365	0.00E+00	7.00E-02	0.00E+00	ERR
TOTAL	0	350	4	1E-06	100	70	4	365	0.00E+00	5.00E-03	0.00E+00	ERR

File Name: SI.WQ3

SOIL INGESTION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE CONSTRUCTION WORKER

Intake from ingestion of soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * EF * ED * IR/BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * \text{CSF or /RfD}$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	
CF = conversion for kg to mg	1E-06
EF = adult exposure frequency (days/yr)	90
ED = adult exposure duration (yr)	1
IR = adult soil ingestion rate (mg/day)	480
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	1
DY = days per year (days/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (days/yr)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg/day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
Arsenic	1.23	90	1	1E-06	480	70	70	365	2.97E-08	1.70E+00	5.05E-08	100.00
TOTAL											5.05E-08	100.00

Contaminant	Concentration Noncarcinogen (mg/kg)	Exposure Frequency (days/yr) Adult	Exposure Duration (yr) Adult	Conversion Factor (kg/mg)	Ingestion Rate (mg/day) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (days/yr)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg/day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
Barium	12.3	90	1	1E-06	480	70	1	365	2.08E-05	7.00E-02	2.97E-04	1.80
Arsenic	1.23	90	1	1E-06	480	70	1	365	2.08E-06	3.00E-04	6.93E-03	42.08
Chromium	13.8	90	1	1E-06	480	70	1	365	2.33E-05	5.00E-03	4.67E-03	28.33
Manganese	28.5	90	1	1E-06	480	70	1	365	4.82E-05	1.40E-01	3.44E-04	2.09
Vanadium	16.8	90	1	1E-06	480	70	1	365	2.84E-05	7.00E-03	4.06E-03	24.63
Zinc	5.9	90	1	1E-06	480	70	1	365	9.98E-06	3.00E-01	3.33E-05	0.20
Cyanide	1.7	90	1	1E-06	480	70	1	365	2.87E-06	2.00E-02	1.44E-04	0.87
TOTAL											1.65E-02	100.00

File Name: SI.WQ4

**EXAMPLE DERMAL CONTACT WITH SOIL CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from dermal contact with soil

$$\text{Intake (mg/kg-day)} = \frac{C \times CF \times SA \times AF \times Abs \times EF \times ED}{BW \times AT}$$

Where:

C	=	Contaminant concentration in soil (mg/kg)
CF	=	Conversion factor (kg/mg)
SA	=	Surface available for contact (cm <sup>2</sup> /event)
AF	=	Soil to skin adherence factor (mg/cm <sup>2</sup> )
Abs	=	Fraction absorbed (percent)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
IR	=	Ingestion rate (mg/day)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kgday)} \times \text{CSF (mg/kgday)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kgday)} / \text{RfD (mg/kgday)} \end{aligned}$$

**Example Carcinogen: 4,4'-DDD**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.0108 \text{ mg/kg} \times 1.0\text{E}-06 \text{ kg/mg} \times 5,800 \text{ cm}^2/\text{event} \times 1\% \times 1 \text{ mg/cm}^2 \times 350}{70 \text{ kg} \times 25,550 \text{ days}} \\ &= 3\text{E}-04 \end{aligned}$$

$$\text{Risk} = 3\text{E}-04 \text{ mg/kgday} \times 2.4\text{E}-01 \text{ mg/kgday}^{-1} = 7\text{E}-10$$

**Example Noncarcinogen: 4,4'-DDT**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.0134 \text{ mg/kg} \times 1.0\text{E}-06 \text{ kg/mg} \times 5,800 \text{ cm}^2/\text{event} \times 1 \text{ mg/cm}^2 \times 1\% \times 350}{70 \text{ kg} \times 8,760 \text{ days}} \\ &= \\ \text{Risk} &= \frac{1\text{E}-08 \text{ mg/kg-day}}{5\text{E}-04 \text{ mg/kg-day}} = 0.00002 \end{aligned}$$

Re: Site 41 Future Residential Adult



SOIL DERMAL CON. EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL CHILD

Dermal contact with soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * SA * AF * Abs * EF * ED / BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } /RfD$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	
CF = conversion factor (kg/mg)	1E-06
SA = child exposed skin surface area (cm <sup>2</sup> )	2300
AF = soil to skin adherence factor (mg/cm <sup>2</sup> )	1
Abs = fraction absorbed (unitless)	Specific
EF = child exposure frequency (events/yr)	350
ED = child exposure duration (years)	8
BW = child body weight (kg)	15
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	8
DY = day per year (day/yr)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Child	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Child	Exposure Duration (yrs) Child	Body Weight (kg) Child	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day) Child	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Child	Percent Carcinogenic Risk Child
No Carcinogenic Contaminants chosen as COPCs	0	1E-06	2300	1	0.01	350	8	15	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL	0	1E-06	2300	1	0.001	350	8	15	70	365	0.00E+00	0.00E+00	0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Child	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Child	Exposure Duration (yrs) Child	Body Weight (kg) Child	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day) Child	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Child	Percent Noncarcinogenic Risk Child
No Noncarcinogenic Compounds Selected as COPCs	0	1E-06	2300	1	0.01	350	8	15	8	365	0.00E+00	7.00E-02	0.00E+00	ERR
TOTAL	0	1E-06	2300	1	0.001	350	8	15	8	365	0.00E+00	5.00E-03	0.00E+00	ERR

File Name: SDC.WQ1

SOIL DERMAL CONTACT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 89)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL ADULT

Dermal contact with soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * SA * AF * Abs * EF * ED / BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:

INPUTS

C = contaminant concentration in soil (mg/kg)	1E-06
CF = conversion factor (kg/mg)	5800
SA = adult exposed skin surface area (cm <sup>2</sup> )	1
AF = soil to skin adherence factor (mg/cm <sup>2</sup> )	Specific
Abs = fraction absorbed (unitless)	350
EF = adult exposure frequency (events/yr)	24
ED = adult exposure duration (years)	70
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	24
ATnc = averaging time for noncarcinogen (yr)	365
DY = day per year (day/yr)	specific
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Adult	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
No Carcinogenic Contaminants chosen as COPCs	0	1E-06	5800	1	0.01	350	24	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL	0	1E-06	5800	1	0.001	350	24	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Adult	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
No Noncarcinogenic Compounds Selected as COPCs	0	1E-06	5800	1	0.01	350	24	70	24	365	0.00E+00	7.00E-02	0.00E+00	ERR
TOTAL	0	1E-06	5800	1	0.001	350	24	70	24	365	0.00E+00	5.00E-03	0.00E+00	ERR

File Name: SDC.WQ2

SOIL DERMAL CONTACT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 89)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 CURRENT MILITARY PERSONNEL

Dermal contact with soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * SA * AF * Abs * EF * ED / BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:

C = contaminant concentration in soil (mg/kg)	INPUTS
CF = conversion factor (kg/mg)	1E-06
SA = adult exposed skin surface area (cm <sup>2</sup> )	5800
AF = soil to skin adherence factor (mg/cm <sup>2</sup> )	1
Abs = fraction absorbed (unitless)	Specific
EF = adult exposure frequency (events/yr)	350
ED = adult exposure duration (years)	4
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	4
DY = day per year (day/yr)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Adult	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
No Carcinogenic Contaminants chosen as COPCs	0	1E-06	5800	1	0.01	350	4	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR
TOTAL	0	1E-06	5800	1	0.001	350	4	70	70	365	0.00E+00	0.00E+00	0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm <sup>2</sup> ) Adult	Adherence Factor (mg/cm <sup>2</sup> )	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
No Noncarcinogenic Contaminants chosen as COPCs	0	1E-06	5800	1	0.01	350	4	70	4	365	0.00E+00	7.00E-02	0.00E+00	ERR
TOTAL	0	1E-06	5800	1	0.001	350	4	70	4	365	0.00E+00	5.00E-03	0.00E+00	ERR

File Name: SDC.WQ3

SOIL DERMAL CONTACT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE CONSTRUCTION WORKER

Dermal contact with soil is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * CF * SA * AF * Abs * EF * ED / BW * ATc \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * \text{CSF or RfD}$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	
CF = conversion factor (kg/mg)	1E-06
SA = adult exposed skin surface area (cm2)	4300
AF = soil to skin adherence factor (mg/cm2)	1
Abs = fraction absorbed (unitless)	Specific
EF = adult exposure frequency (events/yr)	90
ED = adult exposure duration (years)	1
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	1
DY = day per year (day/yr)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm2) Adult	Adherence Factor (mg/cm2)	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
Arsenic	1.23	1E-06	4300	1	0.001	90	1	70	70	365	2.68E-10	5.00E+01	1.33E-08	100.00
TOTAL													1.33E-08	100.00

Contaminant	Concentration Noncarcinogen (mg/kg)	Conversion Factor (kg/mg)	Surface Area (cm2) Adult	Adherence Factor (mg/cm2)	Fraction Absorbed (%)	Exposure Frequency (events/yr) Adult	Exposure Duration (yrs) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day) Adult	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
Barium	4	1E-06	4300	1	0.001	90	1	70	1	365	8.08E-08	7.00E-02	8.66E-07	1.10
Arsenic	1.23	1E-06	4300	1	0.001	90	1	70	1	365	1.86E-08	3.00E-04	6.21E-05	78.99
Chromium	2.4	1E-06	4300	1	0.001	90	1	70	1	365	3.84E-08	5.00E-03	7.27E-06	9.25
Manganese	5.6	1E-06	4300	1	0.001	90	1	70	1	365	8.48E-08	1.40E-01	8.06E-07	0.77
Selenium	0.38	1E-06	4300	1	0.001	90	1	70	1	365	5.45E-09	5.00E-03	1.09E-06	1.39
Vanadium	2.5	1E-06	4300	1	0.001	90	1	70	1	365	3.79E-08	7.00E-03	5.41E-06	8.88
Zinc	4.3	1E-06	4300	1	0.001	90	1	70	1	365	6.51E-08	3.00E-01	2.17E-07	0.28
Cyanide	1.4	1E-06	4300	1	0.001	90	1	70	1	365	2.12E-08	2.00E-02	1.06E-06	1.35
TOTAL													7.86E-05	100.00

**EXAMPLE INHALATION OF PARTICULATES CALCULATIONS**  
**OPERABLE UNIT NO. 4**  
**CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from the inhalation of soil particulates

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{C \times IR \times EF \times ED \times 1/PEF}{BW \times AT}$$

Where:

C	=	Contaminant concentration in soil (mg/kg)
IR	=	Inhalation rate (m <sup>3</sup> /day)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
PEF	=	Particulate Emission Factor (m <sup>3</sup> /kg)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kgday)} \times \text{CSF (mg/kgday)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kgday)}/\text{RfD (mg/kgday)} \end{aligned}$$

**Example Carcinogen: 4,4'-DDT**

$$\begin{aligned} \text{Intake (mg/kg}\cdot\text{day)} &= \frac{0.0134 \text{ mg/kg} \times 20 \text{ m}^3/\text{day} \times 350 \text{ days/yr} \times 24 \text{ yrs} \times 1/4.6E+09 \text{ m}^3/\text{kg}}{70 \text{ kg} \times 25,550 \text{ days}} \\ &= 3E-13 \end{aligned}$$

$$\text{Risk} = 3E-13 \text{ mg/kgday} \times 3.4E-01 \text{ mg/kgday}^{-1} = 9E-14$$

**Example Noncarcinogen: Manganese**

$$\begin{aligned} \text{Intake (mg/kg}\cdot\text{day)} &= \frac{51.7 \text{ mg/kg} \times 20 \text{ m}^3/\text{day} \times 350 \text{ days/yr} \times 24 \text{ yrs} \times 1/4.6E+09 \text{ m}^3/\text{kg}}{70 \text{ kg} \times 8,760 \text{ days}} \\ &= 3E-09 \end{aligned}$$

$$\text{Risk} = \frac{3E-09 \text{ mg/kg}\cdot\text{day}}{4E-04 \text{ mg/kg}\cdot\text{day}} = 0.0000075$$

Re: Site 41 Future Residential Adult

PARTICULATE INHALATION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL CHILD

Intake from the Inhalation of particulates is calculated as follows:

$$\text{Intake (mg/kg-day)} = (C * EF * ED * IR * 1/PEF) / (BW * ATc \text{ or } ATnc * DY)$$

$$\text{Risk} = \text{Intake} * \text{CSF or /RfD}$$

Where:

C = contaminant concentration in soil (mg/kg)  
 CSF = carcinogenic slope factor  
 RfD = reference dose for noncarcinogen  
 IR = inhalation rate (m3)  
 EF = child exposure frequency (days)  
 ED = child exposure duration (years)  
 BW = child body weight (kg)  
 ATc = averaging time for carcinogen (yr)  
 ATnc = averaging time for noncarcinogen (yr)  
 DY = day per year (day/yr)  
 PEF = particulate emission factor (m3/kg)

INPUTS

Calculated  
 Specific  
 Specific  
 10  
 350  
 6  
 15  
 70  
 6  
 365  
 4.63E+09

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day)	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk	Percent Contribution to Risk
No Carcinogens as COPCs	0.00	4.6E+09	350	10	6	15	70	365	0.00E+00	4.20E+01	0.00E+00	ERR
TOTAL											0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day)	Reference Dose (mg/kg-day)	Noncarcinogenic Risk	Percent Noncarcinogenic Risk
No Noncarcinogens as COPCs	0.00	4.6E+09	350	10	6	15	6	365	0.00E+00	4.00E-04	0.00E+00	ERR
TOTAL											0.00E+00	ERR

File Name: PLWQ1

PARTICULATE INHALATION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL ADULT

Intake from the inhalation of particulates is calculated as follows:

$$\text{Intake (mg/kg-day)} = (C * EF * ED * IR * 1/PEF)/(BW * ATc \text{ or } ATnc * DY)$$

$$\text{Risk} = \text{Intake} * \text{CSF or /RfD}$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	Calculated
CSF = carcinogenic slope factor	Specific
RfD = reference dose for noncarcinogen	Specific
IR = inhalation rate (m3)	20
EF = adult exposure frequency (days)	350
ED = adult exposure duration (years)	24
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	24
DY = day per year (day/yr)	365
PEF = particulate emission factor (m3/kg)	4.63E+09

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day)	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk	Percent Contribution to Risk
No Carcinogens as COPCs	0.00	4.6E+09	350	20	24	70	70	365	0.00E+00	4.20E+01	0.00E+00	EHR
TOTAL											0.00E+00	EHR

Contaminant	Concentration Noncarcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day)	Reference Dose (mg/kg-day)	Noncarcinogenic Risk	Percent Noncarcinogenic Risk
No Noncarcinogens as COPCs	0.00	4.6E+09	350	20	24	70	24	365	0.00E+00	4.00E-04	0.00E+00	EHR
TOTAL											0.00E+00	EHR

File Name: PLWQ2

PARTICULATE INHALATION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 CURRENT MILITARY PERSONNEL

Intake from the inhalation of particulates is calculated as follows:

$$\text{Intake (mg/kg-day)} = (C * EF * ED * IR * 1/PEF) / (BW * ATc \text{ or } ATnc * DY)$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:	INPUTS
C = contaminant concentration in soil (mg/kg)	Calculated
CSF = carcinogenic slope factor	Specific
RfD = reference dose for noncarcinogen	Specific
IR = inhalation rate (m3)	20
EF = adult exposure frequency (days)	350
ED = adult exposure duration (years)	4
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	4
DY = day per year (day/yr)	365
PEF = particulate emission factor (m3/kg)	4.83E+09

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Carc Time (years)	Days per year (day/year)	Carc Dose (mg/kg/day)	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk	Percent Contribution to Risk
No Carcinogens as COPCs	0.00	4.8E+09	350	20	4	70	70	365	0.00E+00	4.20E+01	0.00E+00	ERR
TOTAL											0.00E+00	ERR

Contaminant	Concentration Noncarcinogen (mg/kg)	Particulate Emission Factor (m3/kg)	Exposure Frequency (events/yr)	Inhalation Rate (m3/day)	Exposure Duration (yrs)	Body Weight (kg)	Average Noncarc Time (years)	Days per year (day/year)	Noncarc Dose (mg/kg/day)	Reference Dose (mg/kg-day)	Noncarcinogenic Risk	Percent Noncarcinogenic Risk
No Noncarcinogens as COPCs	0.00	4.8E+09	350	20	4	70	4	365	0.00E+00	4.00E-04	0.00E+00	ERR
TOTAL											0.00E+00	ERR

File Name: Pl.WQ3



**EXAMPLE GROUNDWATER INGESTION CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from ingestion of groundwater

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{C \times IR \times EF \times ED}{BW \times AT}$$

Where:

C	=	Contaminant concentration in groundwater (mg/L)
IR	=	Daily intake ingestion rate (L/day)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kgday)} \times \text{CSF (mg/kgday)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kgday)} / \text{RfD (mg/kgday)} \end{aligned}$$

**Example Carcinogen: Trichloroethene**

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{0.013 \text{ mg/L} \times 2 \text{ L/day} \times 350 \text{ days/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 25,550 \text{ days}}$$

$$= 1.5\text{E-}04$$

$$\text{Risk} = 1.5\text{E-}04 \text{ mg/kgday} \times 1.1\text{E-}02 \text{ mg/kgday}^{-1} = 1.7\text{E-}06$$

**Example Noncarcinogen: Trichloroethene**

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{0.013 \text{ mg/L} \times 2 \text{ L/day} \times 350 \text{ days/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 10,950 \text{ days}}$$

$$= 3.5\text{E-}04$$

$$\text{Risk} = \frac{3.5\text{E-}04 \text{ mg/kg}\cdot\text{day}}{6\text{E-}03 \text{ mg/kg}\cdot\text{day}} = 0.58$$

Re: Site 69 Future Residential Adult

GROUNDWATER INC. CONTAMINANT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL CHILD

Intake from drinking water is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * IRw * EF * ED / BW * AT \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:

	INPUTS
C = contaminant concentration in water (mg/l)	
IRw = child daily water ingestion rate (L/Day)	1
EF = child exposure frequency (days/yr)	350
ED = child exposure duration (yr)	6
BW = child body weight (kg)	15
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	6
DY = days per year (day/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/l)	Ingestion Rate (L/day) Child	Exposure Frequency (day/year) Child	Exposure Duration (year) Child	Body Weight (kg) Child	Average Carc Time (years)	Days per year (day/yr)	Carc Dose (mg/kg-day) Child	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Child	Percent Carcinogenic Risk Child
Trichloroethene	0.0101	1	350	6	15	70	365	5.53E-05	1.10E-02	6.09E-07	0.205
1,1,2,2-Tetrachloroethane	0.0102	1	350	6	15	70	365	5.59E-05	2.00E-01	1.12E-05	3.767
Arsenic	0.0182	1	350	6	15	70	365	9.97E-05	1.70E+00	1.70E-04	57.128
Beryllium	0.0049	1	350	6	15	70	365	2.68E-05	4.30E+00	1.15E-04	38.902
										2.97E-04	100.00

Contaminant	Concentration Noncarcinogen (mg/l)	Ingestion Rate (L/day) Child	Exposure Frequency (day/year) Child	Exposure Duration (year) Child	Body Weight (kg) Child	Average Noncarc Time (years)	Days per year (day/yr)	Noncarc Dose (mg/kg-day) Child	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Child	Percent Noncarcinogenic Risk Child
Total 1,2-Dichloroethene	2.4000	1	350	6	15	6	365	1.53E-01	2.00E-02	7.87E+00	27.45
Trichloroethene	0.0101	1	350	6	15	6	365	6.48E-04	6.00E-03	1.08E-01	0.39
Arsenic	0.0182	1	350	6	15	6	365	1.16E-03	3.00E-04	3.88E+00	13.88
Barium	0.4960	1	350	6	15	6	365	3.17E-02	7.00E-02	4.53E-01	1.62
Beryllium	0.0049	1	350	6	15	6	365	3.13E-04	5.00E-03	6.29E-02	0.22
Cadmium	0.0044	1	350	6	15	6	365	2.81E-04	5.00E-04	5.63E-01	2.01
Chromium	0.1230	1	350	6	15	6	365	7.88E-03	5.00E-03	1.57E+00	5.63
Manganese	0.7450	1	350	6	15	6	365	4.76E-02	5.00E-03	9.53E+00	34.08
Mercury	0.0005	1	350	6	15	6	365	3.20E-05	3.00E-04	1.07E-01	0.38
Nickel	0.0340	1	350	6	15	6	365	2.17E-03	2.00E-02	1.09E-01	0.39
Selenium	0.0032	1	350	6	15	6	365	2.05E-04	5.00E-03	4.09E-02	0.15
Vanadium	0.2100	1	350	6	15	6	365	1.34E-02	7.00E-03	1.92E+00	6.88
Zinc	9.1200	1	350	6	15	6	365	5.83E-01	3.00E-01	1.94E+00	6.95
TOTAL										28.0	100.00

GROUNDWATER INGESTION EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 69)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL ADULT

Intake from drinking water is calculated as follows:

$$\text{Intake (mg/kg-day)} = C * IRw * EF * ED/BW * AT \text{ or } ATnc * DY$$

$$\text{Risk} = \text{Intake} * CSF \text{ or } RfD$$

Where:	INPUTS
C = contaminant concentration in water (mg/l)	
IRw = adult daily water ingestion rate (L/Day)	2
EF = adult exposure frequency (days/yr)	350
ED = adult exposure duration (yr)	30
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	30
DY = days per year (day/year)	365
CSF = cancer slope factor (mg/kg-day) <sup>-1</sup>	specific
RfD = reference dose (mg/kg-day)	specific

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/l)	Ingestion Rate (L/day) Adult	Exposure Frequency (day/year) Adult	Exposure Duration (year) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (day/yr)	Carc Dose (mg/kg-day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
Trichloroethene	0.0101	2	350	30	70	70	365	1.19E-04	1.10E-02	1.30E-06	0.205
1,1,2,2-Tetrachloroethane	0.0102	2	350	30	70	70	365	1.20E-04	2.00E-01	2.40E-05	3.767
Arsenic	0.0182	2	350	30	70	70	365	2.14E-04	1.70E+00	3.63E-04	57.126
Beryllium	0.0049	2	350	30	70	70	365	5.75E-05	4.30E+00	2.47E-04	38.902
										6.36E-04	100.00

Contaminant	Concentration Noncarcinogen (mg/l)	Ingestion Rate (L/day) Adult	Exposure Frequency (day/year) Adult	Exposure Duration (year) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (day/yr)	Noncarc Dose (mg/kg-day) Adult	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
Total 1,2- Dichloroethene	2.4000	2	350	30	70	30	365	6.58E-02	2.00E-02	3.29E+00	27.45
Trichloroethene	0.0101	2	350	30	70	30	365	2.77E-04	6.00E-03	4.61E-02	0.39
Arsenic	0.0182	2	350	30	70	30	365	4.99E-04	3.00E-04	1.66E+00	13.88
Barium	0.4960	2	350	30	70	30	365	1.36E-02	7.00E-02	1.94E-01	1.62
Beryllium	0.0049	2	350	30	70	30	365	1.34E-04	5.00E-03	2.68E-02	0.22
Cadmium	0.0044	2	350	30	70	30	365	1.21E-04	5.00E-04	2.41E-01	2.01
Chromium	0.1230	2	350	30	70	30	365	3.37E-03	5.00E-03	6.74E-01	5.63
Manganese	0.7450	2	350	30	70	30	365	2.04E-02	5.00E-03	4.08E+00	34.08
Mercury	0.0005	2	350	30	70	30	365	1.37E-05	3.00E-04	4.57E-02	0.38
Nickel	0.0340	2	350	30	70	30	365	9.32E-04	2.00E-02	4.66E-02	0.39
Selenium	0.0032	2	350	30	70	30	365	8.77E-05	5.00E-03	1.75E-02	0.15
Vanadium	0.2100	2	350	30	70	30	365	5.75E-03	7.00E-03	8.22E-01	6.86
Zinc	9.1200	2	350	30	70	30	365	2.50E-01	3.00E-01	8.33E-01	6.95
TOTAL										12.0	100.00

**EXAMPLE DERMAL CONTACT WITH GROUNDWATER CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from dermal contact with groundwater

$$\text{Intake (mg/kg-day)} = \frac{C \times SA \times PC \times ET \times EF \times ED \times CF}{BW \times AT}$$

Where:

C	=	Contaminant concentration in groundwater (mg/L)
SA	=	Exposed skin surface available for contact (cm <sup>2</sup> )
PC	=	Permeability constant (cm/hr)
ET	=	Exposure time (hr/day)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
CF	=	Conversion factor (1 L/1,000 cm <sup>3</sup> )
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kgday)} \times \text{CSF (mg/kgday)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kgday)} / \text{RfD (mg/kgday)} \end{aligned}$$

**Example Carcinogen: Trichloroethene**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.013 \text{ mg/L} \times 23,000 \text{ cm}^2 \times 2.3\text{E-}01 \text{ cm/hr} \times 0.25 \text{ hr/day} \times 350 \text{ days/yr} \times 3}{70 \text{ kg} \times 25,550 \text{ days}} \\ &= 4.1\text{E-}05 \end{aligned}$$

$$\text{Risk} = 4.1\text{E-}05 \text{ mg/kgday} \times 1.1\text{E-}02 \text{ mg/kgday}^{-1} = 4\text{E-}07$$

**Example Noncarcinogen: Trichloroethene**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.013 \text{ mg/L} \times 23,000 \text{ cm}^2/\text{hr} \times 2.3\text{E-}01 \text{ cm/hr} \times 0.25 \text{ hr/day} \times 350 \text{ days/yr}}{70 \text{ kg} \times 10,950 \text{ days}} \\ &= 5\text{E-}04 \end{aligned}$$

$$\text{Risk} = \frac{5\text{E-}04 \text{ mg/kg-day}}{6\text{E-}03 \text{ mg/kg-day}} = 8\text{E-}02$$

GROUNDWATER DERMAL CONTACT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (S...)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL CHILD

Dermal Contact from groundwater is calculated as follows:

$$\text{Intake (mg/kg-day)} = \text{CW} * \text{SA} * \text{PC} * \text{ET} * \text{EF} * \text{ED} * \text{CF} / \text{BW} * \text{ATc} \text{ or } \text{ATnc} * \text{DY}$$

Risk = Intake \* CSF or /RID

Where:	INPUTS
CW = contaminant concentration in water (mg/l)	
SA = child skin surface available for contact (cm <sup>2</sup> )	10000
PC = contaminant specific dermal permeability (cm/hr)	Specific
ET = child exposure time (hours/day)	0.25
EF = child exposure frequency (days/yr)	350
ED = child exposure duration (years)	6
CF = volumetric conversion factor for water (liter/1000 cm <sup>3</sup> )	0.001
BW = child body weight (kg)	15
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	6
DY = days per year (days)	365

Note: Inputs are site and scenario specific

Contaminant	Concentration Carcinogen (mg/l)	Surface Area (cm <sup>2</sup> ) Child	Dermal Permeability (cm/hr)	Exposure Time (hours/day) Child	Exposure Frequency (days/yr) Child	Exposure Duration (years) Child	Volumetric Conversion (L/m <sup>3</sup> )	Body Weight (kg) Child	Averaging Carc Time (years)	Days per Year (days)	Carc Dose (mg/kg-day) Child	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Child	Percent Carcinogenic Risk Child
Trichloroethene	0.0101	10000	2.30E-01	0.25	350	6	0.001	15	70	365	3.18E-06	1.10E-02	3.50E-07	20.62
1,1,2,2-Tetrachloroethane	0.0102	10000	9.00E-03	0.25	350	6	0.001	15	70	365	1.26E-06	2.00E-01	2.52E-07	14.74
Arsenic	0.0182	10000	1.55E-03	0.25	350	6	0.001	15	70	365	3.86E-07	1.70E+00	6.57E-07	38.61
Beryllium	0.0049	10000	1.55E-03	0.25	350	6	0.001	15	70	365	1.04E-07	4.30E+00	4.47E-07	26.23
TOTAL													1.71E-06	100.00

	Concentration Noncarcinogen (mg/l)	Surface Area (cm <sup>2</sup> ) Child	Dermal Permeability (cm/hr)	Exposure Time (hours/day) Child	Exposure Frequency (days/yr) Child	Exposure Duration (years) Child	Volumetric Conversion (L/m <sup>3</sup> )	Body Weight (kg) Child	Average Noncarc Time (years)	Days per Year (days)	Noncarc Dose (mg/kg-day) Child	Reference Dose (mg/kg-day)	Noncarc Risk Child	Percent Noncarcinogenic Risk Child
Total 1,2-Dichloroethene	2.4	10000	1.00E-02	0.25	350	6	0.001	15	6	365	3.84E-03	2.00E-02	1.92E-01	57.80
Trichloroethene	0.0101	10000	2.30E-01	0.25	350	6	0.001	15	6	365	3.71E-04	6.00E-03	6.19E-02	18.65
Arsenic	0.0182	10000	1.55E-03	0.25	350	6	0.001	15	6	365	4.51E-06	3.00E-04	1.50E-02	4.53
Barium	0.496	10000	1.55E-03	0.25	350	6	0.001	15	6	365	1.23E-04	7.00E-02	1.76E-03	0.53
Beryllium	0.0049	10000	1.55E-03	0.25	350	6	0.001	15	6	365	1.21E-06	6.00E-03	2.43E-04	0.07
Cadmium	0.0044	10000	1.55E-03	0.25	350	6	0.001	15	6	365	1.09E-06	5.00E-04	2.18E-03	0.86
Chromium	0.123	10000	1.55E-03	0.25	350	6	0.001	15	6	365	3.05E-05	5.00E-03	6.09E-03	1.84
Manganese	0.745	10000	1.55E-03	0.25	350	6	0.001	15	6	365	1.85E-04	5.00E-03	3.69E-02	11.12
Mercury	0.0005	10000	1.55E-03	0.25	350	6	0.001	15	6	365	1.24E-07	3.00E-04	4.13E-04	0.12
Nickel	0.034	10000	1.55E-03	0.25	350	6	0.001	15	6	365	8.42E-06	2.00E-02	4.21E-04	0.13
Selenium	0.0032	10000	1.55E-03	0.25	350	6	0.001	15	6	365	7.93E-07	5.00E-03	1.59E-04	0.05
Vanadium	0.21	10000	1.55E-03	0.25	350	6	0.001	15	6	365	5.20E-05	7.00E-03	7.43E-03	2.24
Zinc	9.12	10000	1.55E-03	0.25	350	6	0.001	15	6	365	2.26E-03	3.00E-01	7.53E-03	2.27
TOTAL													0.33	100.00

File Name: GWDC.WQ1

GROUNDWATER DERMAL CONTACT EXPOSURE ASSESSMENT  
 OPERABLE UNIT NO. 4 (SITE 09)  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA  
 FUTURE RESIDENTIAL ADULT

Dermal Contact from groundwater is calculated as follows:

$$\text{Intake (mg/kg-day)} = \text{CW} * \text{SA} * \text{PC} * \text{ET} * \text{EF} * \text{ED} * \text{CF/BW} * \text{ATc or ATnc} * \text{DY}$$

Risk = Intake \* CSF or RfD

Where:	INPUTS
CW = contaminant concentration in water (mg/l)	
SA = adult skin surface available for contact (cm <sup>2</sup> )	23000
PC = contaminant specific dermal permeability (cm/hr)	Specific
ET = adult exposure time (hours/day)	0.25
EF = adult exposure frequency (days/yr)	350
ED = adult exposure duration (years)	30
CF = volumetric conversion factor for water (liter/1000 cm <sup>3</sup> )	0.001
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (yr)	70
ATnc = averaging time for noncarcinogen (yr)	30
DY = days per year (days)	365

Note: Inputs are site and scenario specific

Contaminant	Concentration (mg/l)	Surface Area (cm <sup>2</sup> ) Adult	Dermal Permeability (cm/hr)	Exposure Time (hours/day) Adult	Exposure Frequency (days/yr) Adult	Exposure Duration (years) Adult	Volumetric Conversion (L/m <sup>3</sup> )	Body Weight (kg) Adult	Average Carc Time (years)	Days per Year (days)	Carc Dose (mg/kg-day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
Trichloroethene	0.0101	23000	2.30E-01	0.25	350	30	0.001	70	70	365	7.84E-05	1.10E-02	8.63E-07	20.52
1,1,2,2-Tetrachloroethane	0.0102	23000	9.00E-03	0.25	350	30	0.001	70	70	365	3.10E-06	2.00E-01	6.20E-07	14.74
Arsenic	0.0182	23000	1.55E-03	0.25	350	30	0.001	70	70	365	9.52E-07	1.70E+00	1.62E-06	38.51
Beryllium	0.0049	23000	1.55E-03	0.25	350	30	0.001	70	70	365	2.56E-07	4.30E+00	1.10E-06	26.23
<b>TOTAL</b>													<b>4.20E-06</b>	<b>100.00</b>

	Concentration Noncarcinogen (mg/l)	Surface Area (cm <sup>2</sup> ) Adult	Dermal Permeability (cm/hr)	Exposure Time (hours/day) Adult	Exposure Frequency (days/yr) Adult	Exposure Duration (years) Adult	Volumetric Conversion (L/m <sup>3</sup> )	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per Year (days)	Noncarc Dose (mg/kg-day) Adult	Reference Dose (mg/kg-day)	Noncarc Risk Adult	Percent Noncarcinogenic Risk Adult
Total 1,2-Dichloroethene	2.4	23000	1.00E-02	0.25	350	30	0.001	70	30	365	1.89E-03	2.00E-02	9.45E-02	57.80
Trichloroethene	0.0101	23000	2.30E-01	0.25	350	30	0.001	70	30	365	1.83E-04	6.00E-03	3.06E-02	18.66
Arsenic	0.0182	23000	1.55E-03	0.25	350	30	0.001	70	30	365	2.22E-06	3.00E-04	7.41E-03	4.53
Barium	0.496	23000	1.55E-03	0.25	350	30	0.001	70	30	365	6.06E-05	7.00E-02	8.65E-04	0.53
Beryllium	0.0049	23000	1.55E-03	0.25	350	30	0.001	70	30	365	5.98E-07	5.00E-03	1.20E-04	0.07
Cadmium	0.0044	23000	1.55E-03	0.25	350	30	0.001	70	30	365	5.37E-07	5.00E-04	1.07E-03	0.66
Chromium	0.123	23000	1.55E-03	0.25	350	30	0.001	70	30	365	1.50E-05	5.00E-03	3.00E-03	1.84
Manganese	0.745	23000	1.55E-03	0.25	350	30	0.001	70	30	365	9.10E-05	5.00E-03	1.82E-02	11.12
Mercury	0.0005	23000	1.55E-03	0.25	350	30	0.001	70	30	365	8.10E-08	3.00E-04	2.03E-04	0.12
Nickel	0.034	23000	1.55E-03	0.25	350	30	0.001	70	30	365	4.15E-06	2.00E-02	2.08E-04	0.13
Selenium	0.0032	23000	1.55E-03	0.25	350	30	0.001	70	30	365	3.91E-07	5.00E-03	7.81E-06	0.06
Vanadium	0.21	23000	1.55E-03	0.25	350	30	0.001	70	30	365	2.58E-05	7.00E-03	3.66E-03	2.24
Zinc	9.12	23000	1.55E-03	0.25	350	30	0.001	70	30	365	1.11E-03	3.00E-01	3.71E-03	2.27
													0.16	100.00

File Name: GWDC.WQ2

**EXAMPLE INHALATION OF VOLATILE ORGANICS CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from the inhalation of volatile organics

$$\text{Intake (mg/kg-day)} = \frac{C \times IR \times ET \times EF \times ED}{BW \times AT}$$

Where:

C	=	Contaminant concentration in air (mg/m <sup>3</sup> )
IR	=	Inhalation rate (m <sup>3</sup> /hr)
ET	=	Exposure time (hr/day)
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kgday)} \times \text{CSF (mg/kgday)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kgday)} / \text{RfD (mg/kgday)} \end{aligned}$$

**Example Carcinogen: Trichloroethene**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.0352 \text{ mg/m}^3 \times 0.6 \text{ m}^3/\text{hr} \times 0.25 \text{ hrs/d} \times 350 \text{ days/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 25,550 \text{ days}} \\ &= 3\text{E-}05 \end{aligned}$$

$$\text{Risk} = 3\text{E-}05 \text{ mg/kgday} \times 6\text{E-}03 \text{ mg/kgday}^{-1} = 2\text{E-}07$$

**Example Noncarcinogen: Ethylbenzene**

$$\begin{aligned} \text{Intake (mg/kg-day)} &= \frac{0.273 \text{ mg/m}^3 \times 0.6 \text{ m}^3/\text{hr} \times 0.25 \text{ hrs/d} \times 350 \text{ days/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 10,950 \text{ days}} \\ &= 6\text{E-}05 \end{aligned}$$

$$\text{Risk} = \frac{6\text{E-}05 \text{ mg/kg-day}}{1\text{E+}00 \text{ mg/kg-day}} = 6\text{E-}05$$

PURPOSE: TO ESTABLISH AIR CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS (VOC) ASSOCIATED WITH SHOWERING  
 AND THE SUBSEQUENT FUTURE HYPOTHETICAL INHALATION EXPOSURE OF ADULTS AND ADOLESCENTS

PERTINENT EQUATIONS:

$$C_a = C_{sh}(1 - (1 - \exp(-k_m t)) / (k_m t))$$

where:

$C_a$  = SHOWER AIR CONCENTRATION ( $\mu\text{g}/\text{m}^3$ )  
 $C_{sh}$  = ASYMPTOTIC CONCENTRATION IN AIR ( $\mu\text{g}/\text{m}^3$ )  
 $t$  = SHOWERING TIME (min)  
 $k_m$  = RATE CONSTANT ( $\text{min}^{-1}$ )

$$C_{sh} = (E)(F_w)(100/1000)(F_a)$$

where:

$E$  = THE EFFICIENCY OF RELEASE - WATER TO AIR  
 $F_w$  = THE FLOW RATE OF WATER IN THE SHOWER ( $\text{L}/\text{min}$ )  
 $C_w$  = CONSTITUENT CONCENTRATION IN SHOWER WATER ( $\text{mg}/\text{L}$ )  
 $F_a$  = FLOW RATE OF AIR IN THE SHOWER ( $\text{m}^3/\text{min}$ )

$$k_m = F_a/V_b$$

where:

$V_b$  = THE VOLUME OF AN AVERAGE BATHROOM ( $\text{m}^3$ )

$$E_i = E_{rel}(E_{eff}/H)$$

where:

$E_i$  = THE RELATIVE EFFICIENCY OF RELEASE OF CHEMICAL  $i$  vs. TCE  
 $E_{rel}$  = THE EFFICIENCY OF RELEASE OF TCE  
 $H$  = THE HENRY'S CONSTANT FOR CHEMICAL  $i$  ( $\text{atm} \cdot \text{m}^3/\text{mol} \cdot \text{L}$ )  
 $H_{TCE}$  = THE HENRY'S CONSTANT FOR TCE ( $\text{atm} \cdot \text{m}^3/\text{mol} \cdot \text{L}$ )

$$C_{DI} = (C_{sh})(E_T)(E_F)(E_D)(1 - \exp(-k_m t)) / (k_m t)$$

where:

$k_m$  = The Inhalation rate ( $\text{m}^3/\text{min}$ )  
 $E_T$  = The exposure time ( $\text{hr}/\text{day}$ )  
 $E_F$  = Exposure frequency ( $\text{days}/\text{year}$ )  
 $E_D$  = Exposure duration ( $\text{hr}$ )  
 $1.8$  = Absorbed fraction  
 $50$  = Body weight ( $\text{kg}$ )  
 $AT$  = The averaging time ( $\text{hr}$ )

$$I_{DI} = C_{DI} \cdot CBF$$

where:

$CBF$  = The cardiovascular flow ( $\text{L}/\text{min}$ )

$$H = C_{DI} / R_{DI}$$

where:

$R_{DI}$  = The reference concentration ( $\mu\text{g}/\text{m}^3$ )



ADULT AND CHILD EXPOSURE TO VOCS WHILE SHOWERING

CONSTITUENTS	E <sub>inh</sub>	H <sub>inh</sub>	H <sub>c</sub>	E <sub>c</sub>	F <sub>a</sub>	V <sub>h</sub>	h	Q <sub>i</sub>	F <sub>r</sub>	Q <sub>air</sub>	M	C <sub>p</sub>	[y <sup>-3</sup> atm <sup>-1</sup> h]		[y <sup>-3</sup> atm <sup>-1</sup> h]		[y <sup>-3</sup> atm <sup>-1</sup> h]		[y <sup>-3</sup> atm <sup>-1</sup> h]		[y <sup>-3</sup> atm <sup>-1</sup> h]		M	M'		
													1	2	1	2	1	2	1	2	1	2			1	2
1,1,2,2-Tetrachloroethane	0.6	0.10E-02	0.00E-04	0.0001	2.4	12	0.2	10.2	10	0.001	15	0.00073														
Total 1,2-Dichloroethane	0.6	0.10E-02	0.70E-02	4.17E	2.4	12	0.2	14.00	10	44.12E	15	30.158E1														
Trichloroethane	0.6	0.10E-02	0.10E-02	0.0000	2.4	12	0.2	10.1	10	0.025	15	0.01725														

CONSTITUENTS	1	2	E1	E2	ED	ED'	EW	EW'	AT	AT'	AT''	DOBE	DOBE'	DOBE''	DOBE'''	CBP	BND	ICR	ICR''	M	M'	
																						1
1,1,2,2-Tetrachloroethane	0.30	0.00	0.25	350	30	8	70	15	2550	1050	210	0.00E-07	2.37E-06	3.00E-07	4.50E-08	0.0	1.71E-07	1.71E-08	0.00000	0.00000		
Total 1,2-Dichloroethane	0.30	0.03	0.25	350	50	8	70	15	2550	1050	210	3.69E-02	1.61E-02	1.00E-01	1.00E-01	0.00E+00	0.00E+00	0.00000	0.00000			
Trichloroethane	0.30	0.02	0.25	350	30	8	70	15	2550	1050	210	3.10E-01	4.90E-02	0.22E-00	1.00E-04	0.00E	1.26E-07	1.26E-07	0.00000	0.00000		
Total																	0.00E-07	1.26E-07	0.00E	0.00E		

**EXAMPLE INGESTION OF FISH CALCULATIONS  
OPERABLE UNIT NO. 4  
CONTRACT TASK ORDER 0212**

**Purpose:** Estimate intake/risk from ingestion of fish

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{C \times IR \times FI \times EF \times ED}{BW \times AT}$$

Where:

C	=	Contaminant concentration in fish (mg/kg)
IR	=	Ingestion rate (kg/meal)
FI	=	Fraction ingested from source (%)
EF	=	Exposure frequency (meal/year)
ED	=	Exposure duration (years)
BW	=	Body weight (kg)
AT <sub>c</sub>	=	Averaging time carcinogen (days)
AT <sub>nc</sub>	=	Averaging time noncarcinogen (days)

**Risks:**

$$\begin{aligned} \text{Carcinogens} &= \text{Intake (mg/kg}\cdot\text{day)} \times \text{CSF (mg/kg}\cdot\text{day)}^{-1} \\ \text{Noncarcinogens} &= \text{Intake (mg/kg}\cdot\text{day)}/\text{RfD (mg/kg}\cdot\text{day)} \end{aligned}$$

**Example Carcinogen: 4,4'-DDD**

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{0.15 \text{ mg/kg} \times 0.054 \text{ kg/meal} \times 100\% \times 250 \text{ meals/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 25,550 \text{ days}}$$

$$= 3.4\text{E-}05$$

$$\text{Risk} = 3.4\text{E-}05 \text{ mg/kg}\cdot\text{day} \times 2.4\text{E-}01 \text{ mg/kg}\cdot\text{day}^{-1} = 8\text{E-}06$$

**Example Noncarcinogen: Toluene**

$$\text{Intake (mg/kg}\cdot\text{day)} = \frac{0.039 \text{ mg/kg} \times 0.054 \text{ kg/meal} \times 100\% \times 250 \text{ meals/yr} \times 30 \text{ yrs}}{70 \text{ kg} \times 10,950 \text{ days}}$$

$$= 2.0\text{E-}02$$

$$\text{Risk} = \frac{2.0\text{E-}02 \text{ mg/kg}\cdot\text{day}}{2.0\text{E-}01 \text{ mg/kg}\cdot\text{day}} = 0.0001$$

Re: Site 69 Future Residential Adult

FISH INGESTION EX. ASSESSMENT  
 SITE 69 NEW RIVER  
 REMEDIAL INVESTIGATION CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA

Intake (mg/kg-day) = CF \* IR \* FI \* EF \* ED/BW \* ATc or ATnc \* DY

Risk = Intake \* CSF or /RfD

Where:	INPUTS
CF = contaminant concentration in fish (mg/kg)	
IR = adult ingestion rate (kg/meal)	0.054
FI = fraction ingested from contaminated source (unitless)	100
EF = adult exposure frequency (meals/yr)	250
ED = adult exposure duration (years)	30
BW = adult body weight (kg)	70
ATc = averaging time for carcinogen (years)	70
ATnc = averaging time for noncarcinogen (years)	30
DY = days per year (days/yr)	365

Note: Inputs are scenario and site specific

Contaminant	Concentration Carcinogen (mg/kg)	Ingestion Rate (kg/meal) Adult	Fraction Ingestion (%)	Exposure Frequency (meals/yr) Adult	Exposure Duration (years) Adult	Body Weight (kg) Adult	Average Carc Time (years)	Days per year (days/yr)	Carc Dose (mg/kg-day) Adult	Slope Factor (mg/kg-day) <sup>-1</sup>	Carcinogenic Risk Adult	Percent Carcinogenic Risk Adult
4,4'-DDE	0.28	0.054	1	250	30	70	70	365	8.34E-05	3.40E-01	2.18E-05	53.94
4,4'-DDD	0.15	0.054	1	250	30	70	70	365	3.40E-05	2.40E-01	8.15E-06	20.40
Benzene	0.079	0.054	1	250	30	70	70	365	1.79E-05	2.90E-02	5.19E-07	1.30
Beryllium	0.01	0.054	1	250	30	70	70	365	2.28E-06	4.30E+00	9.74E-06	24.38
TOTAL											4.00E-05	100.00

Contaminant	Concentration Noncarcinogen (mg/kg)	Ingestion Rate (kg/meal) Adult	Fraction Ingestion (%)	Exposure Frequency (meals/yr) Adult	Exposure Duration (years) Adult	Body Weight (kg) Adult	Average Noncarc Time (years)	Days per year (days/yr)	Noncarc Dose (mg/kg-day) Adult	Reference Dose (mg/kg-day)	Noncarcinogenic Risk Adult	Percent Noncarcinogenic Risk Adult
Toluene	0.039	0.054	1	250	30	70	30	365	2.06E-05	2.00E-01	1.03E-04	0.01
Beryllium	0.01	0.054	1	250	30	70	30	365	5.28E-06	5.00E-03	1.08E-03	0.15
Cadmium	0.22	0.054	1	250	30	70	30	365	1.16E-04	1.00E-03	1.16E-01	16.13
Selenium	0.51	0.054	1	250	30	70	30	365	2.69E-04	5.00E-03	5.39E-02	7.48
Zinc	312	0.054	1	250	30	70	30	365	1.65E-01	3.00E-01	5.50E-01	78.24
TOTAL											7.21E-01	100.00

FILE: FISH.WQ1

**APPENDIX R**

**WHITE OAK RIVER BASIN REFERENCE STATIONS**

## WHITE OAK RIVER BASIN REFERENCE STATIONS

### *Water Body Description*

Hadnot Creek, Holland Mill Creek (including Cartwheel Branch) and the section of the White Oak River that encompasses Hadnot Creek, Holland Mill Creek, and Webb Creek are classified as SA from their source to the White Oak River. The SA classifies the water body as a tidal saltwater with shellfishing for market purposes and the following uses: primary recreation, aquatic life propagation and survival, fishing, wildlife, and secondary recreation. Webb Creek is classified as C from its source to the White Oak River. The C classifies the water body as a fresh water with the following uses: aquatic life propagation and survival, fishing, wildlife, and secondary recreation. The section of the White Oak River that encompasses these three creeks is designated by the North Carolina Fisheries Rule as Class C - coastal fishing waters (NCMFC, 1993).

### *Biological Sampling*

Biological samples collected at the background stations consisted of fish and benthic macroinvertebrate. The biological samples were collected to obtain population statistics for fish and benthic macroinvertebrates and to obtain fish tissue samples for chemical analysis (Hadnot Creek only). Prior to initiating the sampling event at each station, the following information describing the site was recorded in the field log book:

Average width, depth and velocity of the water body

Description of substrate

Description of "abiotic" characteristics of the reach such as pools, riffles, runs, channel shape, degree of bank erosion, and shade/sun exposure

Description of "biotic" characteristics of the reach including aquatic and riparian vegetation and wetlands

Water quality measurements were collected during the benthic macroinvertebrate sampling, at a minimum, and during collection of some of the fish samples. On-site water quality measurements at these stations consisted of temperature, pH, specific conductance, salinity and dissolved oxygen. These measurements were conducted prior to sample collection. The station locations and sampling procedures for the collection of the fish and benthic macroinvertebrates is discussed later in this appendix.

### Fish and Shellfish

This section discusses collection of the fish and shellfish samples in the reference stations at Webb Creek, Hadnot Creek, and Holland Mill Creek.

A literature review was conducted to determine the fish species that may potentially be exposed to contaminants in the surface water/sediment exposure pathway. This review included compiling information from State and Federal natural resources agencies. In addition, Baker's experience in sampling similar areas formed a basis for a database of expected species for the area.

Sampling variability can prevent the same species of fish from being sampled at each station because either the preferred species was not captured, or adequate numbers of uniform-size individuals were not captured. Therefore, if the preferred species was not successfully collected to satisfy the above requirements, a substitute species was collected that, if possible, exhibiting a similar trophic position in the estuarine ecosystem.

The collected fish species were identified, measured, and counted. The small fish (less than 20 mm) were weighed in groups of 10 or 20 because of their low individual weight; the larger fish were weighed individually. The

proportion of individuals as hybrids and the proportion of individuals with disease, tumors, fin damage, and skeletal anomalies was recorded at each station.

Fish that exhibited signs of being dead for an extended period of time (i.e., brown gills, bloating) were not retained for tissue analysis because of the potential for decomposition and leaching of contaminants from the organs into the edible portions of the fish.

### Webb Creek

This section discusses collection of the fish samples in Webb Creek including the station locations and sampling procedures.

#### *Station Location*

The fish station WC02 was located on Webb Creek approximately 300 feet upstream from the Camp Lejeune railroad crossing. Station WC03 was located in the White Oak River approximately 25 feet downstream from its confluence with Webb Creek. See fish and benthic macroinvertebrate sampling station figure found later in this appendix for approximate sample locations.

#### *Sampling Procedures*

Fish were collected in Webb Creek using gill nets and hoop nets. All fish that were collected were processed for population statistics; no fish at these stations were collected for tissue analysis.

The gill nets were six feet deep by 50 to 100 feet long with a stretch mesh size ranging from two to four inches, and an approximate twine break strength of 29 pounds. The nets were deployed approximately at the locations shown on the figure found later in this appendix. Weights were attached to the nets to secure them on the bottom of the stream and yellow buoys marked with "Baker Environmental" were attached to the tops of the nets. The nets were deployed in the morning or evening, and they were checked for fish within twelve hours after deployment.

The hoop nets were three to four feet in diameter and fourteen to sixteen feet in length. Twenty-five foot wings were attached to the nets to help direct fish into the net. The nets were deployed in the middle of the channel with the wings stretched across the creek in a forty-five degree angle. The end of the net and the wings were secured using 6.5 foot wooden posts. The nets were checked at least once daily, as the fish usually survive when captured in these nets.

### Hadnot Creek

This section discusses collection of the fish samples in Hadnot Creek including the station locations and sampling procedures.

#### *Station Location*

Fish were collected from four stations in Hadnot Creek (HC01, HC02, HC03 and HC04). HC01 was located approximately 100 feet upstream of Rt. 1104. Station HC02 was located approximately 2,500 feet upstream of Rt. 58. Station HC03 was located in the White Oak River approximately 100 feet upstream from its confluence with Hadnot Creek. Finally, station HC04 was located in Hadnot Creek by the road off of the Rt. 1105 crossing. In October, 1993, fish were collected by Baker in Hadnot Creek as part of another investigation (Baker, 1993). Fillet samples of these fish were chemically analyzed and the results are included in this ERA.

#### *Sampling Procedures*

Fish were collected at these stations for population statistics; fish were not collected at these stations for tissue analysis. Fish were collected in Hadnot Creek using hoop nets, gill nets, a haul seine, pole fishing, and the

backpack electroshocker. The same sample collection and sample processing procedures used in Webb Creek were conducted at the Hadnot Creek stations for the gill nets and hoop nets. Pole fishing only was conducted during the October 1993 sampling.

Fish were collected in the furthest upstream stations using electrofishing, conducted with a Smith-Root, Inc., backpack electrofisher powered by a 300-watt portable generator. A DC current was applied utilizing a "rattail" as the cathode and a hand-held electrode as the anode. Blocking seines were placed downstream and upstream of the shocking areas to aid in the collection of the fish. The length of the shocking time per subsection was recorded as seconds of applied current. Stunned fish were collected with one-inch mesh or smaller dip nets handled by members of the field sampling team.

### Holland Mill Creek

This section discusses collection of the fish samples in Holland Mill Creek including the station locations and sampling procedures.

#### *Station Location*

Fish were collected from three stations in Holland Mill Creek (HM01, HM02, and HM03). HM01 was located on Cartwheel Branch just upstream of Rt. 1444. Station HM02 was located at the confluence of Holland Mill Creek and Cartwheel Branch. Station HM03 was located in the White Oak River approximately 50 feet downstream from Holland Mill Creek.

#### *Sampling Procedures*

Fish were collected at these stations for population statistics. Fish were not collected at these stations for tissue analysis. Fish were collected in Holland Mill Creek using hoop nets, gill nets, a haul seine, and the backpack electroshocker. The same sample collection and sample processing procedures used in the Webb Creek and Hadnot Creek stations were conducted at the Holland Mill Creek stations.

### Benthic Macroinvertebrates

This section discusses collection of benthic macroinvertebrate samples in the reference stations at Webb Creek, Hadnot Creek, and Holland Mill Creek.

#### Webb Creek

Benthic macroinvertebrates were collected in Webb Creek using the ponar grab deployed from the boat.

Benthic macroinvertebrates were collected from a boat using a standard ponar grab. The dimensions of the ponar are 23 x 23 cm (9 x 9 in.) for a sampling area of 529 cm<sup>2</sup> or 0.0523 m<sup>2</sup> (81 in<sup>2</sup>).

The ponar was deployed from the boat, which was positioned in slightly different locations for each replicate to prevent re-sampling the same area. After retrieving the ponar with a sediment sample, it was opened into a clean tub and the sediments were removed with a teflon spatula. The sediments were transferred to a 0.5 mm sieve that was agitated (by hand) in water to remove the small particles. The remaining contents in the sieve were transferred into 16-ounce plastic sample jars. The jars were filled up to one-half full with sediments, and buffered formalin solution (10 percent by weight) was added to the remainder of the jar to preserve the benthic macroinvertebrates contained in the sediments. A 100 percent cotton paper label, marked in pencil with the sample number, was placed inside the jar. The outside of the jar was labeled with the sample number using a black permanent marker to identify the sample containers.

After all the benthic macroinvertebrate sampling at the New River was completed, the sample jars were transported to RMC Environmental Services, Inc. for sample sorting and taxonomic identification of the benthic

macroinvertebrates.

#### Hadnot Creek

Benthic macroinvertebrates were collected in Hadnot Creek using the ponar grab deployed from the boat. The boat was not used at HC01 or HC04 because the water was too shallow. Benthic macroinvertebrates were collected using the same procedures used for collecting benthic macroinvertebrates in Webb Creek.

#### Holland Mill Creek

Benthic macroinvertebrates were collected in Holland Mill Creek using the ponar grab deployed from the boat. The boat was not used at HM01 because the water was too shallow. The same sample collection and sample processing procedures used in Webb Creek were conducted at the Holland Mill Creek stations.

#### Biological Tissue Sample Results

The analytical parameters included TCL VOCs, TCL SVOCs, TAL metals, and TCL pesticides/PCBs. Background fish fillet tissue were collected from Hadnot Creek and analyzed these results are discussed below.

#### *Hadnot Creek*

Several metals were detected in the Hadnot Creek fillet tissue samples. These metals included aluminum, arsenic, calcium, chromium, copper, magnesium, manganese, mercury, nickel, potassium, sodium and zinc in the fillet samples. The range of detected levels for these chemicals in the fish fillet tissue samples from Hadnot Creek are as follows:

	<u>Minimum (mg/kg)</u>	<u>Maximum (mg/kg)</u>
Aluminum	36.5	36.5
Arsenic	0.34	3.9
Calcium	154	1,170
Chromium	0.21	0.68
Copper	0.18	0.46
Magnesium	254	319
Manganese	0.008	0.38
Mercury	0.05	0.24
Nickel	0.45	0.45
Potassium	3,270	4,040
Sodium	505	1,060
Zinc	3.9	6.5

The maximum detect of manganese was in the southern flounder. The maximum detect of sodium was found in the red drum. Aluminum, calcium, chromium, magnesium, mercury, and potassium were detected at their highest concentrations in the largemouth bass. The maximum detects of arsenic, copper, nickel, and zinc were found in the longnose gar.

Two pesticides were detected in the fillet tissue samples, 4,4'-DDE and alpha-chlordane. 4,4'-DDE was detected twice, both in the longnose gar. Alpha-chlordane was detected once in the largemouth bass. The range of detected concentrations for these constituents were as follows:

	<u>Minimum (ug/kg)</u>	<u>Maximum (ug/kg)</u>
4,4'-DDE	9.7	12.0
alpha-Chlordane	0.17	0.17



Two VOCs and three SVOCs were detected in the fillet tissue samples. Common laboratory contaminants were the primary detections, which included methylene chloride, acetone, di-n-octyl phthalate and bis(2-ethylhexyl)phthalate. Phenol was also detected in the fillet tissue samples. The concentration ranges for these chemicals were the following:

	<u>Minimum (ug/kg)</u>	<u>Maximum (ug/kg)</u>
Methylene chloride	3.0	41.0
Acetone	16	130
di-n-octyl phthalate	61	500
bis(2-ethylhexyl) phthalate	820	17,000
Phenol	460	2,100

### Field Chemistry Results

Samples from these surface water bodies were collected from the water surface and bottom.

#### *Webb Creek*

At Webb Creek, the salinity at station WC02 ranged from 0 to 7 ppt. Conductivity ranged from 850 to 10,500 micromhos/cm. Dissolved oxygen levels ranged from 4.4 to 9 mg/L. The pH at station WC02 in Webb Creek ranged from 6.85 to 7.48 S.U. in the surface water. The temperature of the water at WC02 ranged from 17.5 to 21 °C.

At WC03, the salinity ranged from 10 to 12.8 ppt. The conductivity ranged from 16,500 to 18,000 micromhos/cm. Dissolved oxygen levels ranged from 8.5 to 10 mg/L. The pH at WC03 in Webb Creek ranged from 7.33 to 7.56 S.U. in the surface water. The temperature of the water at WC03 ranged from 19 to 23 °C.

#### *Hadnot Creek*

In Hadnot Creek, the salinity at station HC01 was 0 ppt. The conductivity was 13.5 micromhos/cm. The dissolved oxygen level was 7.7 mg/L. The pH at HC01 was 6.89 S.U. in the surface water, and the temperature of the Hadnot Creek water was 17 °C.

At station HC02, the salinity ranged from 0 to 16.5 ppt. The conductivity ranged from 720 to 22,800 micromhos/cm. The dissolved oxygen levels ranged from 1 to 7.3 mg/L. The pH at HC02 ranged from 6.7 to 7.2 S.U. in the surface water. The temperature of the water at HC02 ranged from 15.5 to 22 °C.

At station HC03, the salinity ranged from 17 to 17.9 ppt. The conductivity ranged from 25,500 to 26,500 micromhos/cm. The dissolved oxygen level was 12 mg/L. The pH at HC03 ranged from 7.69 to 7.79 S.U. in the surface water. The temperature of the water at HC03 ranged from 17.5 to 17.8 °C.

At station HC04, the salinity was 0 ppt. The conductivity was 65 micromhos/cm, and the dissolved oxygen level was 5.3 mg/L. The pH at HC04 was 6.16 S.U. in the surface water, and the temperature of the water was 17.3 °C.

#### *Holland Mill Creek*

In Holland Mill Creek, the salinity was 0 ppt at station HM01. The conductivity was 140 micromhos/cm, and the dissolved oxygen level was 8.0 mg/L. The pH at station HM01 was 6.9 S.U. in the surface water, and the temperature of the water was 17.5 °C.

At station HM02, the salinity ranged from 1 to 25 ppt. The conductivity ranged from 2,490 to 38,000 micromhos/cm. The dissolved oxygen levels ranged from 5.0 to 11.8 mg/L. The pH at station HM02 ranged from 6.72 to 7.9 S.U. in the surface water. The temperature of the water at HM02 ranged from 15.2 to 20 °C.

At station HM03, the salinity ranged from 13.5 to 22 ppt. The conductivity ranged from 19,000 to 32,000 micromhos. The dissolved oxygen levels ranged from 3.4 to 10.8 mg/L. The pH at station HM03 ranged from 6.81 to 7.90 S.U. in the surface water. The temperature of the water at HM03 ranged from 17.5 to 17.8 °C.

**Statistical Summary of  
Analytical Results  
(Surface Water)**

## KEY TO STATISTICAL AND ANALYTICAL SUMMARY TABLES

U - Indicated analyte was analyzed for but not detected

J - Indicates an estimated value

UJ - Not detected, quantitation limit may be inaccurate or imprecise

R - Result is rejected and unusable

B - Not detected substantially above the level reported in laboratory or field blanks (organics)

P - There is greater than 25% difference for detected pesticide/PCB concentrations between the two GC columns, the lower of the two values is reported

L - Result is biased low

K - Result is biased high

ND - Analyte not detected

NZ - Analyte not analyzed

mg/L - Milligrams per liter

ug/L - Micrograms per liter

mg/kg - Milligrams per kilogram

ug/kg - Micrograms per kilogram

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SURFACE WATER - METALS

PARAMETER	MINIMUM	MAXIMUM	SAMPLE No. OF MAXIMUM DETECTED	ARITHMETIC AVERAGE	RME	LOG NORMAL	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
	DETECTED VALUE (ug/L)	DETECTED VALUE (ug/L)				UPPER 95% CONFIDENCE LEVEL (ug/L)			
Aluminum	692.00	692.00	+ HC-SW04	253.10	488.87	1019.72	1	5	20%
Arsenic	20.00	20.00	+ HC-SW03	5.30	13.35	3190.11	1	5	20%
Barium	9.00	26.00	+ HC-SW03	19.60	25.87	35.22	5	5	100%
Calcium	11600.00	107000.00	+ HC-SW03D	53760.00	92784.90	456379.04	5	5	100%
Chromium	125.00	130.00	+ HC-SW03	54.70	118.12	40374.07	2	5	40%
Iron	291.00	746.00	+ HC-SW01	492.00	666.33	793.41	5	5	100%
Magnesium	954.00	633000.00	+ HC-SW03	258640.80	576299.05	1.50E+16	5	5	100%
Potassium	14500.00	203000.00	+ HC-SW03	84234.00	187308.88	5.24E+12	3	5	60%
Selenium	6.00	6.00	+ HC-SW03	2.00	4.29	38.67	1	5	20%
Sodium	6090.00	2560000.00	+ HC-SW03D	1.01E+06	2.17E+06	4.80E+14	5	5	100%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SURFACE WATER - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO PESTICIDES/PCBs WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 + = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 \*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 RME = REASONABLE MAXIMUM EXPOSURE  
 NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE



MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SURFACE WATER - METALS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Aluminum	535.00	535.00	*+ HM-SW02	269.50	657.32	48037.76	1	3	33%
Barium	20.00	49.00	*+ HM-SW01	35.67	60.35	204.30	3	3	100%
Calcium	14100.00	302000.00	*+ HM-SW03	118766.67	387190.45	4.42E+14	3	3	100%
Chromium	36.00	158.00	*+ HM-SW03	66.33	202.69	3.67E+12	2	3	67%
Iron	320.00	559.00	*+ HM-SW02	434.67	636.62	843.56	3	3	100%
Lead	58.10	58.10	*+ HM-SW03	19.95	75.65	1.70E+27	1	3	33%
Magnesium	2830.00	754000.00	*+ HM-SW03	288610.00	973947.76	1.02E+35	3	3	100%
Potassium	41100.00	288000.00	*+ HM-SW03	109978.33	372096.67	1.33E+36	2	3	67%
Selenium	1.50	41.00	*+ HM-SW03	15.00	52.97	8.42E+13	2	3	67%
Silver	37.00	37.00	*+ HM-SW03	16.83	46.42	284713.62	1	3	33%
Sodium	16500.00	6750000.00	*+ HM-SW03	2501833.33	8733985.25	1.96E+44	3	3	100%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SURFACE WATER - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO PESTICIDES/PCBs WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 + = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 \*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 RME = REASONABLE MAXIMUM EXPOSURE  
 NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SURFACE WATER - METALS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Barium	27.00	29.00	*+ WC-SW02	28.00	34.31	32.19	2	2	100%
Calcium	40500.00	46900.00	*+ WC-SW02	43700.00	63904.80	58284.51	2	2	100%
Chromium	97.00	97.00	*+ WC-SW03	52.25	334.80	1.32E+20	1	2	50%
Iron	321.00	660.00	*+ WC-SW02	490.50	1560.72	14358.69	2	2	100%
Magnesium	29000.00	44800.00	*+ WC-SW03	36900.00	86780.60	133710.58	2	2	100%
Potassium	10900.00	136000.00	*+ WC-SW03	73450.00	468390.70	1.01E+23	2	2	100%
Sodium	202000.00	895000.00	*+ WC-SW03	548500.00	2736301.00	6.83E+11	2	2	100%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SURFACE WATER - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Aldrin	0.04	0.04	*+ WC-SW02	0.03	0.06	0.07	1	2	50%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 + = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 \*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE  
 RME = REASONABLE MAXIMUM EXPOSURE  
 NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/L)	MAXIMUM DETECTED VALUE (ug/L)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/L)	RME (ug/L)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/L)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE



**Statistical Summary of  
Analytical Results  
(Sediment)**

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - METALS

PARAMETER	MINIMUM DETECTED VALUE (mg/kg)	MAXIMUM DETECTED VALUE (mg/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (mg/kg)	RME (mg/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (mg/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Aluminum	780.00	14000.00	+ HC-SD03-612	5467.78	8305.91	20353.32	9	9	100%
Arsenic	0.26	1.90	*+ HC-SD02-612	1.71	2.67	8.56	6	9	67%
Barium	4.10	17.20	+ HC-SD03-612	9.75	13.11	21.84	8	9	89%
Beryllium	0.14	0.32	+ HC-SD02-612	0.16	0.24	4.60	3	6	50%
Cadmium	0.03	0.66	HC-SD03-06	0.11	0.24	0.42	7	9	78%
Calcium	1030.00	3620.00	+ HC-SD01-06	2645.56	3233.82	3840.09	9	9	100%
Chromium	1.30	41.60	+ HC-SD03-612	10.81	18.97	53.55	9	9	100%
Cobalt	4.50	5.00	HC-SD03-612	1.87	2.91	4.01	2	9	22%
Copper	0.66	1.50	*+ HC-SD02-06	1.35	1.75	2.01	6	9	67%
Iron	382.00	11100.00	+ HC-SD03-06D	3396.56	5709.65	28323.00	9	9	100%
Lead	3.70	5.30	*+ HC-SD03-06	4.50	9.55	305.02	2	2	100%
Magnesium	77.10	6540.00	+ HC-SD03-612	1977.79	3486.31	1292043.17	7	9	78%
Manganese	3.50	64.70	HC-SD03-612	16.54	29.38	62.63	9	9	100%
Mercury	0.25	0.42	*+ HC-SD03-612	0.34	0.48	11.17	3	3	100%
Nickel	1.80	12.10	+ HC-SD03-612	3.77	6.49	17.25	4	9	44%
Potassium	623.00	1840.00	+ HC-SD03-612	671.39	1079.26	2769.97	4	9	44%
Selenium	0.21	0.60	HC-SD02-06	0.30	0.39	0.48	5	9	56%
Sodium	1630.00	2750.00	+ HC-SD02-06	845.25	1750.35	183541390882.91	2	6	33%
Thallium	0.14	0.44	+ HC-SD03-612	0.23	0.31	0.46	6	9	67%
Vanadium	1.50	36.90	+ HC-SD03-612	11.11	18.54	56.26	9	9	100%
Zinc	20.80	40.00	+ HC-SD03-612	12.71	22.07	63.76	3	9	33%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
beta-BHC	1.70	1.70	*+ HC-SD04-612	1.93	2.39	2.58	1	9	11%
delta-BHC	0.64	0.64	*+ HC-SD01-06	1.82	2.35	2.91	1	9	11%
Heptachlor	0.48	2.00	*+ HC-SD04-612	1.89	2.42	3.26	2	9	22%
4,4'-DDD	1.50	4.00	HC-SD03-612	2.16	3.11	3.50	3	9	33%
4,4'-DDT	1.20	1.20	*+ HC-SD03-06D	3.23	4.23	5.08	1	9	11%
Methoxychlor	0.94	0.94	*+ HC-SD04-06	17.66	23.58	92.52	1	9	11%
Endrin aldehyde	0.59	7.10	+ HC-SD02-06	3.56	5.02	10.80	3	9	33%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED									

- \* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE
  - + = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE
  - \*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE
- RME = REASONABLE MAXIMUM EXPOSURE  
 NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Acetone	70.00	70.00	HC-SD01-06	18.06	30.44	36.73	1	9	11%
Carbon Disulfide	14.00	19.00	HC-SD02-612	12.44	15.67	18.14	2	9	22%
2-Butanone	7.00	7.00	*+ HC-SD01-06	11.06	13.94	15.49	1	9	11%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SEDIMENT - METALS

PARAMETER	MINIMUM DETECTED VALUE (mg/kg)	MAXIMUM DETECTED VALUE (mg/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (mg/kg)	RME (mg/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (mg/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Aluminum	337.00	13600.00	+ HM-SD02-06	6181.29	10292.21	655067.62	7	7	100%
Barium	11.00	18.70	+ HM-SD02-06	8.71	13.92	68.49	4	7	57%
Cadmium	0.03	0.11	HM-SD01-06D	0.06	0.08	0.10	7	7	100%
Calcium	282.00	7860.00	+ HM-SD02-612	2952.86	4844.12	22431.34	7	7	100%
Chromium	1.10	38.40	+ HM-SD02-06	19.63	32.39	2021.73	7	7	100%
Cobalt	4.00	4.40	+ HM-SD02-06	2.02	3.18	6.18	2	7	29%
Iron	225.00	32400.00	+ HM-SD02-612	12262.43	21399.01	27918943.98	7	7	100%
Lead	0.62	9.20	+ HM-SD03-06	4.35	6.94	32.96	7	7	100%
Magnesium	26.70	5700.00	+ HM-SD03-06	2576.66	4422.69	136198282.35	7	7	100%
Manganese	1.30	67.20	+ HM-SD02-06	34.14	56.82	8851.72	7	7	100%
Mercury	0.09	0.35	+ HM-SD03-06	0.23	0.30	0.38	7	7	100%
Nickel	9.60	14.20	+ HM-SD03-06	6.76	11.07	359.48	4	7	57%
Potassium	1510.00	1760.00	+ HM-SD03-612	1007.00	1596.65	13233.89	4	7	57%
Selenium	0.25	0.40	HM-SD02-06	0.21	0.29	0.39	2	7	29%
Silver	0.49	0.49	*+ HM-SD01-06	0.39	0.49	0.60	1	7	14%
Thallium	0.13	0.37	+ HM-SD02-06	0.20	0.29	0.52	4	7	57%
Vanadium	0.66	30.00	+ HM-SD02-612	16.69	27.76	18094.26	6	7	86%
Zinc	6.70	43.10	+ HM-SD02-06	23.57	34.53	65.13	7	7	100%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SEDIMENT - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
beta-BHC	3.80	7.30	HM-SD01-06D	3.24	4.69	5.98	2	7	29%
Aldrin	0.56	0.72	*+ HM-SD01-612	1.84	2.60	4.20	2	7	29%
Dieldrin	0.58	1.50	*+ HM-SD01-612	3.55	5.13	12.37	2	7	29%
4,4'-DDE	1.00	4.30	*+ HM-SD01-612	4.01	5.37	8.82	2	7	29%
4,4'-DDD	0.87	3.10	*+ HM-SD01-612	2.85	4.16	6.44	4	7	57%
4,4'-DDT	1.70	1.70	*+ HM-SD01-612	3.79	5.13	6.75	1	7	14%
alpha-Chlordane	1.30	1.30	*+ HM-SD01-612	1.99	2.61	3.14	1	7	14%
gamma-Chlordane	3.00	3.00	+ HM-SD01-612	2.24	2.86	3.56	1	7	14%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Di-n-butylphthalate	534.00	619.00	+ HM-SD02-612	423.29	573.31	766.73	3	7	43%
bis(2-Ethylhexyl)phthalate	454.00	454.00	*+ HM-SD03-612	378.64	500.04	607.73	1	7	14%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE



MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SEDIMENT - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - METALS

PARAMETER	MINIMUM DETECTED VALUE (mg/kg)	MAXIMUM DETECTED VALUE (mg/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (mg/kg)	RME (mg/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (mg/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Aluminum	8200.00	14800.00	*+ WC-SD02-06	12275.00	15932.10	19239.95	4	4	100%
Barium	13.30	28.20	+ WC-SD02-06	18.83	26.76	35.92	4	4	100%
Cadmium	0.06	0.26	+ WC-SD02-06	0.13	0.24	1.11	4	4	100%
Calcium	2190.00	4060.00	*+ WC-SD02-06	3222.50	4132.21	4914.08	4	4	100%
Chromium	8.70	42.60	+ WC-SD03-612	24.93	42.26	246.57	4	4	100%
Cobalt	3.50	3.90	*+ WC-SD03-612	2.44	4.16	21.71	2	4	50%
Iron	8120.00	20700.00	+ WC-SD03-612	13980.00	20133.62	29586.84	4	4	100%
Lead	5.10	16.90	+ WC-SD02-06	9.85	16.48	51.03	4	4	100%
Magnesium	618.00	6060.00	*+ WC-SD03-612	3197.00	6127.63	817766.37	4	4	100%
Manganese	26.00	47.80	*+ WC-SD03-612	39.35	50.44	60.95	4	4	100%
Mercury	0.23	0.40	*+ WC-SD02-06	0.31	0.41	0.48	4	4	100%
Nickel	3.80	11.40	+ WC-SD03-612	7.25	11.11	21.80	4	4	100%
Potassium	1410.00	1590.00	*+ WC-SD03-612	905.88	1719.51	81148.45	2	4	50%
Thallium	0.24	0.24	+ WC-SD03-06	0.16	0.23	0.31	1	4	25%
Vanadium	11.90	31.00	+ WC-SD03-612	21.33	30.50	45.84	4	4	100%
Zinc	27.20	52.00	+ WC-SD02-06	33.83	48.09	61.59	4	4	100%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - PESTICIDES/PCBs

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
delta-BHC	0.79	0.79	*+ WC-SD02-612	1.99	3.02	9.99	1	4	25%
Aldrin	1.20	1.20	*+ WC-SD02-06	1.93	2.65	3.66	1	4	25%
Dieldrin	3.70	3.70	*+ WC-SD02-06	4.00	4.79	4.98	1	4	25%
4,4'-DDE	16.00	16.00	+ WC-SD02-06	7.08	14.12	97.81	1	4	25%
4,4'-DDD	12.00	12.00	+ WC-SD02-06	6.08	10.78	28.91	1	4	25%
4,4'-DDT	0.76	2.60	*+ WC-SD02-06	2.37	4.64	91.00	3	4	75%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
Benzo(a)pyrene	544.00	544.00	*+ WC-SD03-612	436.25	554.81	635.17	1	4	25%

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

MARINE CORPS BASE CAMP LEJEUNE  
 STATISTICAL SUMMARY OF ANALYTICAL RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - VOLATILE ORGANIC COMPOUNDS

PARAMETER	MINIMUM DETECTED VALUE (ug/kg)	MAXIMUM DETECTED VALUE (ug/kg)	SAMPLE No. OF MAXIMUM DETECTED VALUE	ARITHMETIC AVERAGE (ug/kg)	RME (ug/kg)	LOG NORMAL UPPER 95% CONFIDENCE LEVEL (ug/kg)	No. OF TIMES DETECTED	No. OF TIMES ANALYZED	FREQUENCY OF DETECTION
NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED									

\* = THE RME IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

+ = THE LOG NORMAL 95% UCL IS GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

\*+ = BOTH THE RME AND LOG NORMAL 95% UCL ARE GREATER THAN THE MAXIMUM DETECTED VALUE; THEREFORE, THE MAXIMUM VALUE IS USED TO CALCULATE CHRONIC DAILY INTAKE

RME = REASONABLE MAXIMUM EXPOSURE

NA = NOT APPLICABLE

Analytical Summary of Results  
(Surface Water)

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HADNOT CREEK  
SURFACE WATER - METALS

BAKER I.D.	HC-SW01	HC-SW02	HC-SW03	HC-SW03D	HC-SW04
LABORATORY I.D.	5167-16	5162	5166	5163	5152
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994	06-MAY-1994	08-MAY-1994
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L
Aluminum	356 U	303 U	301 U	187 U	692
Arsenic	1 U	1 UJ	20	10 UJ	1 U
Barium	19 J	20 J	26 J	24 J	9 J
Calcium	27000	36600	86600	107000	11600
Chromium	9 U	19 U	130 J	125 J	9 U
Iron	746	528	339	291	556
Magnesium	1450	44800	633000	613000	954
Potassium	1670 U	14500	203000	202000	1670 U
Selenium	1 U	5 U	6 J	1 UJ	1 UJ
Sodium	6900	383000	2090000	2560000	6090

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HADNOT CREEK  
SURFACE WATER PESTICIDES AND PCBs

BAKER I.D.	HC-SW01	HC-SW02	HC-SW03	HC-SW03D	HC-SW04
LABORATORY I.D.	5167-16	5162	5166	5163	5152
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994	06-MAY-1994	08-MAY-1994
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l

---

NO PESTICIDES OR PCBs WERE DETECTED



MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HADNOT CREEK  
SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HC-SW01	HC-SW02	HC-SW03	HC-SW03D	HC-SW04
LABORATORY I.D.	5167-16	5162	5166	5163	5152
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994	06-MAY-1994	08-MAY-1994
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l

---

NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HADNOT CREEK  
SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HC-SW01	HC-SW02	HC-SW03	HC-SW03D	HC-SW04
LABORATORY I.D.	5167-16	5162	5166	5163	5152
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994	06-MAY-1994	08-MAY-1994
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l

---

NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SURFACE WATER - METALS

BAKER I.D.	HM-SW01	HM-SW02	HM-SW03
LABORATORY I.D.	5167-18	5161	5160
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994
UNITS	UG/L	UG/L	UG/L
Aluminum	259 U	535 J	288 U
Barium	49 J	38 J	20 J
Calcium	14100	40200	302000
Chromium	10 U	36 J	158 J
Iron	425	559	320
Lead	1 U	2.5 U	58.1
Magnesium	2830	109000	754000
Potassium	1670 U	41100	288000
Selenium	1.5 J	5 U	41 J
Silver	10 U	17 U	37 J
Sodium	16500	739000	6750000

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SURFACE WATER - PESTICIDES AND PCBs

BAKER I.D.	HM-SW01	HM-SW02	HM-SW03
LABORATORY I.D.	5167-18	5161	5160
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l	ug/l

---

NO PESTICIDES OR PCBs WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HM-SW01	HM-SW02	HM-SW03
LABORATORY I.D.	5167-18	5161	5160
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l	ug/l

---

NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HM-SW01	HM-SW02	HM-SW03
LABORATORY I.D.	5167-18	5161	5160
DATE COLLECTED	08-MAY-1994	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l	ug/l

---

NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SURFACE WATER - METALS

BAKER I.D.	WC-SW02	WC-SW03
LABORATORY I.D.	5167-8	5158
DATE COLLECTED	06-MAY-1994	06-MAY-1994
UNITS	UG/L	UG/L
Barium	29 J	27 J
Calcium	46900	40500
Chromium	15 U	97 J
Iron	660	321
Magnesium	29000	44800
Potassium	10900	136000
Sodium	202000	895000

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SURFACE WATER - PESTICIDES AND PCBs

BAKER I.D.	WC-SW02	WC-SW03
LABORATORY I.D.	5167-8	5158
DATE COLLECTED	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l
Aldrin	0.035 J	0.05 U



MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SURFACE WATER - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	WC-SW02	WC-SW03
LABORATORY I.D.	5167-8	5158
DATE COLLECTED	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l

---

NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SURFACE WATER - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	WC-SW02	WC-SW03
LABORATORY I.D.	5167-8	5158
DATE COLLECTED	06-MAY-1994	06-MAY-1994
UNITS	ug/l	ug/l

---

NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED

**Analytical Summary of Results  
(Sediment)**

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - METALS

BAKER I.D. LABORATORY I.D. DATE COLLECTED UNITS	HC-SD01-06 5050 8-MAY-1994 MG/KG	HC-SD01-612 5044 8-MAY-1994 MG/KG	HC-SD02-06 5057-2 6-MAY-1994 MG/KG	HC-SD02-612 5054 6-MAY-1994 MG/KG	HC-SD03-06 5238 07-MAY-1994 MG/KG	HC-SD03-06D 5237 07-MAY-1994 MG/KG	HC-SD03-612 5236 07-MAY-1994 MG/KG	HC-SD04-06 5052 8-MAY-1994 MG/KG	HC-SD04-612 5051 8-MAY-1994 MG/KG
Aluminum	2940 J	1880 J	7820 J	10100 J	3120 J	7310 J	14000 J	780 J	1260 J
Arsenic	0.46 J	0.28 J	1.1 J	1.9 J	7.5 U	6.5 U	7.9 U	0.45 J	0.26 J
Barium	16.3 J	14.6 J	9.2 J	8.7 J	3.9 U	10.2	17.2	4.1 J	5.5 J
Beryllium	0.14 J	0.16 U	0.25 J	0.32 J	0.95 R	0.92 R	1.3 R	0.13 U	0.15 U
Cadmium	0.03 J	0.03 J	0.1 J	0.04 J	0.66	0.08	0.04 U	0.03 J	0.03 UJ
Calcium	3620 J	3330 J	2030 J	1610 J	3380 J	3350 J	3310 J	1030 J	2150 J
Chromium	2.3	3.2	6	6	16.1	18.8	41.6	2	1.3
Cobalt	1.6 U	1.8 U	2.7 U	1.8 U	3.7 U	4.5	5	1.5 U	1.6 U
Copper	1	1.1	1.5	0.81	4.9 U	4.3 U	3.5 U	0.66	0.73
Iron	648	586	3660	4630	7280 J	11100 J	1700 J	382	583
Lead	0.77 R	0.88 R	1.1 R	7.1 R	5.3	3.7	8.6 R	1 R	1.1 R
Magnesium	87.7	77.1	1450	1040	4420	4130	6540	48.2 U	62.5 U
Manganese	6.9	6.5	6.5	4.9	17.1	35.1	64.7	3.7	3.5
Mercury	0.19 R	0.13 R	0.42 R	0.24 R	0.34	0.25	0.42	0.11 R	0.08 R
Nickel	1.6 U	1.8 U	2.7 U	1.8	9.9	5.5	12.1	1.5 U	1.6 U
Potassium	349 U	396 U	623	395 U	1420	1250	1840	324 U	355 U
Selenium	0.27 J	0.34 J	0.6 J	0.47 J	0.48 UJ	0.41 UJ	0.51 UJ	0.21 J	0.2 UJ
Sodium	339 U	385 U	2750	1630	14100 R	9860 R	6620 R	315 U	344 U
Thallium	0.14	0.16	0.42	0.28	0.34 U	0.29	0.44	0.13 U	0.15 U
Vanadium	2.6	2.8	8.4	7	20.5	18.4	36.9	1.5	1.9
Zinc	4.9 U	4.5 U	9.7 U	6.6 U	20.8	34.3	40	4.5 U	8.3 U

MARINE COPRS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - PESTICIDES AND PCBs

BAKER I.D.	HC-SD01-06	HC-SD01-612	HC-SD02-06	HC-SD02-612	HC-SD03-06	HC-SD03-06D	HC-SD03-612	HC-SD04-06	HC-SD04-612
LABORATORY I.D.	5057-7	5044	5055	5054	5238	5237	5236	5052	5051
DATE COLLECTED	8-MAY-1994	8-MAY-1994	6-MAY-1994	6-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	8-MAY-1994	8-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
beta-BHC	2.4 U	2.8 U	4.2 U	2.8 U	5.8 U	4.9 U	6.2 U	2.3 U	1.7 J
delta-BHC	0.64 J	2.8 U	4.2 U	2.8 U	5.8 U	4.9 U	6.2 U	2.3 U	2.5 U
Heptachlor	0.48 J	2.8 U	4.2 U	2.8 U	5.8 U	4.9 U	6.2 U	2.3 U	2 J
4,4'-DDD	2.4 U	2.8 U	1.5 J	2.8 U	11 U	2 J	4 J	2.3 U	2.5 U
4,4'-DDT	4.7 U	5.4 U	8.2 U	5.3 U	11 U	1.2 J	12 U	4.4 U	4.8 U
Methoxychlor	24 U	28 U	42 U	28 U	58 U	49 U	62 U	0.94 J	25 U
Endrin aldehyde	0.59 J	5.4 U	7.1 J	0.77 J	11 U	9.6 U	12 U	4.4 U	4.8 U

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HADNOT CREEK  
SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HC-SD01-06	HC-SD01-612	HC-SD02-06	HC-SD02-612	HC-SD03-06	HC-SD03-06D	HC-SD03-612	HC-SD04-06	HC-SD04-612
LABORATORY I.D.	5057-7	5044	5055	5054	5238	5237	5236	5052	5051
DATE COLLECTED	8-MAY-1994	8-MAY-1994	6-MAY-1994	6-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	8-MAY-1994	8-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

NO SEMIVOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - HADNOT CREEK  
 SEDIMENT - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HC-SD01-06	HC-SD01-612	HC-SD02-06	HC-SD02-612	HC-SD03-06	HC-SD03-06D	HC-SD03-612	HC-SD04-06	HC-SD04-612
LABORATORY I.D.	5057-7	5044	5055	5054	5238	5237	5236	5052	5051
DATE COLLECTED	8-MAY-1994	8-MAY-1994	6-MAY-1994	6-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	8-MAY-1994	8-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	70 J	16 UJ	25 UJ	16 UJ	34 UJ	29 UJ	37 UJ	13 UJ	15 UJ
Carbon Disulfide	14 U	16 U	14	19 J	34 U	29 U	37 U	13 U	15 U
2-Butanone	7 J	16 UJ	25 UJ	16 UJ	34 UJ	29 UJ	37 UJ	13 UJ	15 UJ

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SEDIMENT - METALS

BAKER I.D. LABORATORY I.D. DATE COLLECTED UNITS	HM-SD01-06 5243-18 08-MAY-1994 MG/KG	HM-SD01-06D 5220 08-MAY-1994 MG/KG	HM-SD01-612 5219 08-MAY-1994 MG/KG	HM-SD02-06 5242 07-MAY-1994 MG/KG	HM-SD02-612 5241 07-MAY-1994 MG/KG	HM-SD03-06 5240 07-MAY-1994 MG/KG	HM-SD03-612 5239 07-MAY-1994 MG/KG
Aluminum	457 J	337 J	505 J	13600 J	9850 J	8760 J	9760 J
Barium	3.4 U	2.1 U	3.9 U	18.7	13.7	11	12.9
Cadmium	0.03	0.11	0.03	0.08	0.06	0.05	0.03
Calcium	282 J	508 J	2850 J	4250 J	7860 J	2920 J	2000 J
Chromium	1.6	1.1	1.5	38.4	28.1	30.7	36
Cobalt	1.3 U	1.4 U	1.4 U	4.4	3.5 U	3.9 U	4
Iron	262 J	225 J	350 J	15800 J	32400 J	16900 J	19900 J
Lead	0.62 J	0.74 J	1	6	7.2	9.2	5.7
Magnesium	35.5	26.7	34.4	4940	3000	5700	4300
Manganese	1.9	1.3	1.6	67.2	55.5	50.2	61.3
Mercury	0.09	0.16	0.18	0.27	0.32	0.35	0.27
Nickel	1.3 U	1.4 U	1.4 U	11.2	9.6	14.2	10.3
Potassium	297 U	304 U	317 U	1510	1600	1720	1760
Selenium	0.17 U	0.17 U	0.25 J	0.4 J	0.45 UJ	0.5 UJ	0.37 UJ
Silver	0.49	0.37 U	0.39 U	0.85 U	0.95 U	1.1 U	0.79 U
Thallium	0.12 U	0.12 U	0.13	0.37	0.32	0.35 U	0.27
Vanadium	0.84	0.62 U	0.66	27.1	30	28.4	29.5
Zinc	9.7	6.7	8.3	43.1	33.2	34.1	29.9



MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SEDIMENT - PESTICIDES AND PCBs

BAKER I.D.	HM-SD01-06	HM-SD01-06D	HM-SD01-612	HM-SD02-06	HM-SD02-612	HM-SD03-06	HM-SD03-612
LABORATORY I.D.	5243-18	5220	5219	5242	5241	5240	5239
DATE COLLECTED	08-MAY-1994	08-MAY-1994	08-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
beta-BHC	2.1 UJ	7.3 J	3.8	5.1 U	5.5 U	6 U	4.5 U
Aldrin	2.1 U	0.56 J	0.72 J	5.1 U	5.5 U	6 U	4.5 U
Dieldrin	4 U	0.58 J	1.5 J	9.8 U	11 U	12 U	8.8 U
4,4'-DDE	4 U	1 J	4.3	9.8 U	11 U	12 U	8.8 U
4,4'-DDD	4 U	0.87 J	3.1	9.8 U	11 U	2.5 J	1.1 J
4,4'-DDT	4 U	4.1 U	1.7 J	9.8 U	11 U	12 U	8.8 U
alpha-Chlordane	2.1 U	2.1 U	1.3 J	5.1 U	5.5 U	6 U	4.5 U
gamma-Chlordane	2.1 U	2.1 U	3	5.1 U	5.5 U	6 U	4.5 U

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - HOLLAND MILL CREEK  
 SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HM-SD01-06	HM-SD01-06D	HM-SD01-612	HM-SD02-06	HM-SD02-612	HM-SD03-06	HM-SD03-612
LABORATORY I.D.	5243-18	5220	5219	5242	5241	5240	5239
DATE COLLECTED	08-MAY-1994	08-MAY-1994	08-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Di-n-butylphthalate	401 U	412 U	429 U	614 J	619 J	1150 U	534 J
bis(2-Ethylhexyl)phthalate	401 UJ	412 UJ	429 UJ	943 U	1058 U	1150 U	454 J

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - HOLLAND MILL CREEK  
SEDIMENT - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	HM-SD01-06	HM-SD01-06D	HM-SD01-612	HM-SD02-06	HM-SD02-612	HM-SD03-06	HM-SD03-612
LABORATORY I.D.	5243-18	5220	5219	5242	5241	5240	5239
DATE COLLECTED	08-MAY-1994	08-MAY-1994	08-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

---

NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - METALS

BAKER I.D.	WC-SD02-06	WC-SD02-612	WC-SD03-06	WC-SD03-612
LABORATORY I.D.	5243-10	5232	5235	5234
DATE COLLECTED	06-MAY-1994	06-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	MG/KG	MG/KG	MG/KG	MG/KG
Aluminum	14800 J	8200	11500 J	14600 J
Barium	28.2	13.3	14.6	19.2
Cadmium	0.26	0.12	0.06	0.07
Calcium	4060 J	3260 J	2190 J	3380 J
Chromium	18.1	8.7	30.3	42.6
Cobalt	3.5	2.3 U	2.4 U	3.9
Iron	14600 J	8120	12500 J	20700 J
Lead	16.9	11.9	5.1	5.5
Magnesium	1690	618	4420	6060
Manganese	40.2	26	43.4	47.8
Mercury	0.4	0.36	0.23	0.26
Nickel	5.7	3.8	8.1	11.4
Potassium	739 U	508 U	1410	1590
Thallium	0.3 U	0.21 U	0.24	0.32 U
Vanadium	21	11.9	21.4	31
Zinc	52	27.8	28.3	27.2

MARINE CORPS BASE CAMP LEJEUNE  
 ANALYTICAL SUMMARY OF RESULTS  
 BACKGROUND - WEBB CREEK  
 SEDIMENT - PESTICIDES AND PCBs

BAKER I.D.	WC-SD02-06	WC-SD02-612	WC-SD03-06	WC-SD03-612
LABORATORY I.D.	5243-10	5232	5235	5234
DATE COLLECTED	06-MAY-1994	06-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg
delta-BHC	5.2 U	0.79 J	3.7 U	5.4 U
Aldrin	1.2 J	3.9 U	3.7 U	5.4 U
Dieldrin	3.7 J	7.5 U	7.1 U	10 U
4,4'-DDE	16	7.5 U	7.1 U	10 U
4,4'-DDD	12	7.5 U	7.1 U	10 U
4,4'-DDT	2.6 J	1.1 J	0.76 J	10 U

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SEDIMENT - SEMIVOLATILE ORGANIC COMPOUNDS

BAKER I.D.	WC-SD02-06	WC-SD02-612	WC-SD03-06	WC-SD03-612
LABORATORY I.D.	5243-10	5232	5235	5234
DATE COLLECTED	06-MAY-1994	06-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg
Benzo(a)pyrene	1000 U	688 U	714 U	544 J

MARINE CORPS BASE CAMP LEJEUNE  
ANALYTICAL SUMMARY OF RESULTS  
BACKGROUND - WEBB CREEK  
SEDIMENT - VOLATILE ORGANIC COMPOUNDS

BAKER I.D.	WC-SD02-06	WC-SD02-612	WC-SD03-06	WC-SD03-612
LABORATORY I.D.	5243-10	5232	5235	5234
DATE COLLECTED	06-MAY-1994	06-MAY-1994	07-MAY-1994	07-MAY-1994
UNITS	ug/kg	ug/kg	ug/kg	ug/kg

---

NO VOLATILE ORGANIC COMPOUNDS WERE DETECTED

## Field Chemistry Results



**FIELD CHEMISTRY FROM BIOLOGICAL SAMPLES  
HADNOT CREEK, HOLLAND MILL CREEK, AND WEBB CREEK  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Sample Identification	Sample Location	Salinity (ppt)	Conductivity (micromhos/cm)	DO (mg/L)	pH (S.U.)	Temperature (deg. C)
HC01-SW/SD-FS/BN	surface	0	13.5	7.7	6.89	17
	bottom	NA	NA	NA	NA	NA
HC02-SW/SD	surface	0.8	1,810	5.9	6.71	16.1
	bottom	15.5	21,900	1.0	6.73	18.2
HC02-FS/BN	surface	0.3	1,200	NA	NA	20.5
	bottom	13.1	20,900	NA	NA	22
	surface	0	720	7.3	7.2	15.5
	bottom	10.5	17,200	1	6.7	20
	surface	0	1,050	NA	NA	20.5
	bottom	16.5	22,800	NA	NA	21
HC03-SW/SD	surface	17	25,500	12	7.79	17.5
	bottom	NA	NA	NA	NA	NA
HC03-FS/BN	surface	17.9	26,500	NA	7.69	17.8
	bottom	NA	NA	NA	NA	NA
HC04-SW/SD-FS/BN	surface	0	65	5.3	6.16	17.3
	bottom	NA	NA	NA	NA	NA
HM01-SW/SD-FS/BN	surface	0	140	8.0	6.9	17.5
	bottom	NA	NA	NA	NA	NA
HM02-SW/SD	surface	24	36,000	11.8	7.9	17.2
	bottom	25	38,000	11.6	7.6	17.6
HM02-FS/BN	surface	21	29,000	7.75	NA	21
	bottom	19	27,000	7.75	NA	20
	surface	2	3,810	NA	NA	19
	bottom	3.75	6,000	NA	NA	19.5
	surface	1	2,490	5.8	6.85	15.5
	bottom	1.1	2,700	5.0	6.72	15.2
HM03-SW/SD	surface	13.5	19,000	3.4	6.81	17.8
	bottom	NA	NA	NA	NA	NA
HM03-FS/BN	surface	22	32,000	10.8	7.90	17.5
	bottom	NA	NA	NA	NA	NA

Sample Identification	Sample Location	Salinity (ppt)	Conductivity (micromhos/cm)	DO (mg/L)	pH (S.U.)	Temperature (deg. C)
WC02-SW/SD	surface	4.5	9,000	9.0	7.48	21
	bottom	5.5	9,000	7.0	7.48	20.5
	surface	0	975	5.1	7.08	17.5
	bottom	0	1,250	4.4	7.15	17.5
WC02-FS/BN	surface	0	850	5.5	6.98	20.5
	bottom	7	10,500	6.1	6.85	21
WC03-SW/SD	surface	10	16,500	10	7.33	23
	bottom	10	16,500	8.5	7.36	22.4
WC03-FS/BN	surface	12	17,200	9.1	7.43	20
	bottom	12.8	18,000	9.6	7.56	19

ppt = parts per thousand

S.U. = Standard Units

NA = Not Analyzed

Sample Location = Water surface or water bottom

DO = Dissolved Oxygen level

FS = Fish sample

BN = Benthic Macroinvertebrate sample

SW/SD = Surface water/sediment sample

**Positive Detection Summary  
Fish Fillet Tissue Analysis**

MARINE CORPS BASE CAMP LEJEUNE  
BACKGROUND - HADNOT CREEK  
POSITIVE DETECTIONS SUMMARY  
FISH FILLET TISSUE SAMPLES

Parameter	HC1A-RD (Red Drum) (mg/kg)	HC1A-SF (Southern Flounder) (mg/kg)	HC1A-LBA (Largemouth Bass) (mg/kg)	HC1A-LBB (Largemouth Bass) (mg/kg)	HC1A-LBC (Largemouth Bass) (mg/kg)	HC1A-BCA (Blue Crab) (mg/kg)	HC1A-BCA (Blue Crab) (mg/kg)	HC1A-GA (Longnose Gar) (mg/kg)	HC1A-GB (Longnose Gar) (mg/kg)
Volatiles									
Acetone	0.13 J	0.056 J	0.077 J	0.07 J	0.037 J	0.11 J	0.099 J	0.028 J	0.016 J
Methylene Chloride	0.041	0.013 B	0.017 B	0.016 B	0.003 B	0.011 B	0.022 B	0.004 B	0.015 B
Semivolatiles									
Phenol	ND	0.46	ND	2.1	1.6	ND	ND	ND	ND
Di-n-octyl phthalate	ND	ND	0.061 J	ND	0.085	ND	ND	0.29 J	0.5 J
Bis(2-ethylhexyl)phthalate	1.1 B	0.82 B	3.6 B	3.2 B	4.8 B	ND	ND	11 J	17 J
Pesticides/PCBs									
4,4'-DDD	ND	ND	ND	ND	ND	0.0066	0.0056	ND	ND
4,4'-DDE	ND	ND	ND	ND	ND	0.0087	0.0046	0.012	0.0097
alpha-Chlordane	ND	ND	ND	ND	0.00017 P	0.0018	0.0012	ND	ND
Aroclor-1260	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics									
Aluminum	ND	ND	ND	36.5	ND	ND	ND	ND	ND
Arsenic	0.7 L	0.82	0.34 L	0.37 L	0.36 K	0.68	0.39	2.5	3.9 L
Barium	ND	ND	ND	ND	ND	ND	10.1	ND	ND
Cadmium	ND	ND	ND	ND	ND	0.14	0.11 J	ND	ND
Calcium	154	271	528	684	1170	4480	32200	493	520
Chromium	0.38 L	ND	0.23 L	0.68 L	0.63 L	ND	0.52 L	0.32 L	0.21 L
Copper	0.3 J	0.18 J	0.2 J	0.24 J	0.28 J	7.9	5.8	0.46 J	0.18 J
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	285	254	298	292	319	591	1800	286	300
Manganese	0.13	0.38	0.09 J	0.09 J	0.08 J	1.8	13.6	0.24 J	0.21 J
Mercury	0.07	0.05	0.22	0.24	0.17 K	0.08	0.02 J	0.22	0.14
Nickel	ND	ND	ND	ND	ND	ND	ND	0.45 L	ND
Potassium	3930	3700	3740	3610	4040	2170	1860	3410	3270
Sodium	1060	607	505	580	529	4060	4270	623	523
Zinc	5	5	3.9	4.4	4.6 L	25	17.9	6.5	4.6

## Fish Distribution and Characterization

**FISH DISTRIBUTION AND CHARACTERIZATION  
BACKGROUND STATIONS - WEBB, HADNOT, AND HOLLAND MILL CREEKS**

**MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Scientific Name	Length N.C. (cm)	Length Atlas (cm)	Water Type	Habitat	Spawning	Tolerance	Family	Sources
Atlantic Menhaden	<u>Brevoortia tyrannus</u>	20	46	Brackish or marine, enters freshwater	Rivers, streams	NA	Intermediate	Clupeidae	1,2,3,4
Spot	<u>Leiostomas xanthurus</u>	NA	NA	Brackish or marine, enters freshwater	NA	NA	NA	Sciaenidae	1
Stripped Mullet	<u>Mugil cephalus</u>	NA	23-35	Brackish or marine, enters freshwater	Rivers	NA	NA	Mugilidae	1,2
Pinfish	<u>Lagodon rhomboides</u>	NA	38	Marine, seldom enters freshwater	Shallow waters	NA	NA	Sparidae	1,2
Mud Catfish (Yellow Bullhead)	<u>Ictalopus natalis</u>	24	-38	Freshwater	Rivers Streams	April through May	Tolerant	Ictaluridae	1,2,3
Redbreast Sunfish	<u>Lepomis auritus</u>	18	6-15	Freshwater	Streams	April through June	NA	Centrarchidae	1,2,3
Atlantic Croaker	<u>Micropogonias undulatus</u>	NA	61	Estuaries, brackish- water or marine	NA	NA	NA	Sciaenidae	1,2
Pumpkinseed	<u>Lepomis gibbosus</u>	20	8-20	Freshwater	Streams Creeks	April through October	Moderately Tolerant	Centrarchidae	1,2,3,4
Longnose Gar	<u>Lepisosteus osseus</u>	80	-150	Freshwater; May enter brackish water	Rivers	April through May	Intermediate	Lepisosteidae	1,2,3
Summer Flounder	<u>Paralichthys dentatus</u>	NA	37	Brackish or marine, enters freshwater	Rivers	NA	NA	Bothidae	1
Flier	<u>Centrarchus macropterus</u>	12	7-19	Freshwater	Streams	April through May	NA	Centrarchidae	1,2,3
Chain Pickerel	<u>Esox niger</u>	44	38-45	Freshwater	Streams Creeks	February through March	Intermediate	Esocidae	1,2,3

**FISH DISTRIBUTION AND CHARACTERIZATION  
BACKGROUND STATIONS - WEBB, HADNOT, AND HOLLAND MILL CREEKS  
REMEDIAL INVESTIGATION, CTO-0232  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Scientific Name	Length N.C. (cm)	Length Atlas (cm)	Water Type	Habitat	Spawning	Tolerance	Family	Sources
Redear Fish	<u>Lepomis microlophus</u>	18	14-25	Freshwater	Streams	May through August	Intermediate	Centrarchidae	1,2,3
Warmouth	<u>Lepomis gulosus</u>	16	8-26	Freshwater	Rivers Streams	May through August	Intermediate	Centrarchidae	1,2,3
White Perch	<u>Morone americana</u>	NA	to 48	Brackish water; Freshwater	Bays and estuaries; Rivers and lakes	NA	Intermediate	Percichthyidae	3,5
Bluefish	<u>Pomatomus saltatrix</u>	NA	NA	Coastal waters	Surface waters; Near shore and off shore	NA	NA	Pomatomidae	2
Bluegill	<u>Lepomis macrochirus</u>	25	18-20	Freshwater	Rivers Streams Creeks	May through October	Intermediate	Centrarchidae	1,2,3
White Catfish	<u>Ictalurus catus</u>	31	-46	Freshwater	Rivers	May through June	Intermediate	Ictaluridae	1,2,3
Largemouth Bass	<u>Micropterus salmoides</u>	48	12-70	Freshwater	Rivers Streams Creeks	May through June	Intermediate	Centrarchidae	1,2,3
Mummichog	<u>Fundulus heteroclitus</u>	7	8-10	Shallow coastal waters	Rivers Streams	April through August	NA	Cyprinodontid ae	1,2,3
Redfin Pickerel	<u>Esox americanus</u>	23	25-30	Freshwater	Streams Creeks	February through March	NA	Esocidae	1,2,3
Hog Choker	<u>Trinectes maculatus</u>	5	7-12	Shallow coastal waters; Occasionally enters freshwater	Rivers Streams	March through April	NA	Soleidae	1,2,3

**FISH DISTRIBUTION AND CHARACTERIZATION  
 BACKGROUND STATIONS - WEBB, HADNOT, AND HOLLAND MILL CREEKS  
 REMEDIAL INVESTIGATION, CTO-0232  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Scientific Name	Length N.C. (cm)	Length Atlas (cm)	Water Type	Habitat	Spawning	Tolerance	Family	Sources
Pirate Perch	<u>Aphredoderus sayanus</u>	9	7-14	Freshwater	Streams Creeks	January through March	Intermediate	Aphredoderida e	1,2,3
Eastern Mosquito (Mosquitofish) --	<u>Gambusia affinis</u>	NA	NA	Fresh or brackish water	Ponds, lakes, ditches, backwaters, sluggish streams	NA	Intermediate	Poeciliidae	2,5

- 1 Menhinick, 1992.
- 2 Boschung, 1983.
- 3 USEPA, 1989d.
- 4 Raasch, 1991.
- 5 Kennish, 1986.

NA = Information not Available



**TOTAL NUMBER AND PERCENT OF AQUATIC SPECIES IDENTIFIED PER AREA  
WEBB CREEK AND HADNOT CREEK**

**MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	WEBB CREEK		Total Detected	HADNOT CREEK				Total Detected
	WC02	WC03		HC01	HC02	HC03	HC04	
<b>FISH SPECIES</b>								
Spot	4		4			12		12
Stripped Mullet	4		4			3		3
Pumpkinseed			0		3			3
Mudcat	3		3	3				3
Redbreast sunfish	1		1	2				2
Long-Nosed Gar	9	5	14					0
American flier			0	3				3
Chain pickerel			0	1				1
Redear fish			0	1				1
Atlantic croaker			0			5		5
Warmouth			0		1			1
Bluefish			0			3		3
Yellow Bullhead	3		3	2				2
Blue gill	4		4					0
White catfish	1		1					0
Largemouth bass	2		2					0
Summer flounder		1	1					0
Mummichog		3	3					0
Pinfish	25	24	49			5		5
Atlantic menhaden			0			2		2
Redfin pickerel			0				2	2
White perch			0			1		1
Hog choker			0			1		1
Pirate perch			0				8	8

**TOTAL NUMBER AND PERCENT OF AQUATIC SPECIES IDENTIFIED PER AREA  
WEBB CREEK AND HADNOT CREEK**

**MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	WEBB CREEK		Total Detected	HADNOT CREEK				Total Detected
	WC02	WC03		HC01	HC02	HC03	HC04	
<b>NO. OF SPECIES</b>	9	4	12	5	2	8	2	18
<b>NO. OF INDIVIDUALS</b>	53	33	86	10	4	32	10	56
<b>OTHER AQUATIC SPECIES</b>								
Grass shrimp		3	3					0
Crayfish			0				3	3
<b>NUMBER OF SPECIES</b>	0	1	1	0	0	0	1	1
<b>NO. OF INDIVIDUALS</b>	0	3	3	0	0	0	3	3

**TOTAL NUMBER AND PERCENT OF AQUATIC SPECIES IDENTIFIED PER AREA  
HOLLAND MILL CREEK**

**MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	HOLLAND MILL CREEK (CARTWHEEL BRANCH)			Total Detected
	HM01	HM02	HM03	
Spot			8	8
Stripped Mullet		11	3	14
Pumpkinseed	16	2		18
Chain pickerel	2			2
Swamp darter	6			6
Mud sunfish	1			1
Black drum		1		1
Ligar		3		3
Gizzard Shad		2		2
Spotted sunfish		2		2
Blue gill	2	1		3
Atlantic menhaden			199	199
Largemouth bass		1		1
Hog choker			2	2
Summer flounder		1	17	18
Mummichog		6		6
Pinfish		7	4	11
Goby, freshwater	1	1		2
<b>NUMBER OF SPECIES</b>	<b>6</b>	<b>12</b>	<b>6</b>	<b>18</b>
<b>NO. OF INDIVIDUALS</b>	<b>28</b>	<b>38</b>	<b>233</b>	<b>299</b>

**TOTAL NUMBER AND PERCENT OF AQUATIC SPECIES IDENTIFIED PER AREA  
HOLLAND MILL CREEK**

**MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	HOLLAND MILL CREEK (CARTWHEEL BRANCH)			Total Detected
	HM01	HM02	HM03	
<b>OTHER AQUATIC SPECIES</b>				
Unknown	1			1
Grass shrimp		13		13
Crayfish	3			3
<b>NUMBER OF SPECIES</b>	2	1	0	3
<b>NO. OF INDIVIDUALS</b>	4	13	0	17

HADNOT CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	HC01			HC02			HC03			HC04		
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)
Strippet Mullet	HC03							15.25	45	45			
								12.5	20	20			
								12.5	20	20			
		COUNT						3		3			
		AVERAGE						13.41666667		28.33333333			
		MAXIMUM						15.25		45			
		MINIMUM						12.5		20			
Atlantic Menhaden	HC03							+1 collected, no length or weight					
								5	<5	2.5			
		COUNT						2		2			
		AVERAGE						5		2.5			
		MAXIMUM						5		2.5			
		MINIMUM						5		2.5			
		Blue Fish	HC03						7	7	7		
							11	17	17				
							8	8	8				
COUNT								3		3			
AVERAGE								8.66666667		10.66666667			
MAXIMUM								11		17			
MINIMUM								7		7			
Spot	HC03						12.5	22	22				
							5.5	<5.0	2.5				
							6.75	<5.0	2.5				
							5	<5.0	2.5				
							3.5	<5.0	2.5				
							5.5	<5.0	2.5				
							14	40	40				
							13.5	35	35				
							12	35	35				
							14	35	35				
							5.5	<5.0	2.5				
							11.5	20	20				
		COUNT							12		12		
		AVERAGE							9.02083333		16.83333333		
		MAXIMUM							14		40		
MINIMUM							3.5		2.5				





HOLLAND MILL CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	HM01			HM02			HM03			
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	
Mullet	HM02				38.5	640	640				
					39.5	600	600				
					34.5	400	400				
					34.5	400	400				
					33.5	360	360				
					34	340	340				
					37	460	460				
					35	520	520				
					33.5	410	410				
					32	320	320				
					31	370	370				
			HM03						14.5	40	40
									6.5	<5	2.5
									+1 collected, no length or weight		
			COUNT			11		11	3		3
	AVERAGE			34.818182		438.1818182	10.5		21.25		
	MAXIMUM			39.5		640	14.5		40		
	MINIMUM			31		320	6.5		2.5		
Atlantic Menhaden	HM03							6	24	4	
								6		4	
								5.7		4	
								5.4		4	
								5.5		4	
								5.8		4	
								5.7	22	2.2	
								5.5		2.2	
								5		2.2	
								5.5		2.2	
								5.5		2.2	
								5.2		2.2	
								5.5		2.2	
								5.5		2.2	
								5.6		2.2	
								6.2		2.2	
								6	25	2.5	
								5.5		2.5	
								5		2.5	
								5.5		2.5	
								5.5		2.5	
								5.5		2.5	
								6		2.5	
								5		2.5	
								5.5		2.5	
								5.5	20	2	
								5.7		2	
								5		2	
								5		2	
								6		2	
								5.5		2	
								5.5		2	
								6		2	
								6		2	
								5.5		2	
								5.5	27	1.8	
								5.8		1.8	
								5.5		1.8	
								5.7		1.8	
								6		1.8	
								6		1.8	
								6.5		1.8	
								5.5		1.8	
								6.5		1.8	
								5.5		1.8	
						5.5		1.8			
						5.5		1.8			
						6		1.8			
						5.5		1.8			
						5.5		1.8			
						5.5	20	2			
						4.5		2			
						5		2			
						5.5		2			
						5.5		2			
						5.5		2			
						6		2			
						5.5		2			
						6		2			
						6		2			
						6		2			
						138 collected no length or weight					
	COUNT						199		61		
	AVERAGE						5.6		2.2540984		
	MAXIMUM						6.5		4		
	MINIMUM						4.5		1.8		



HOLLAND MILL CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	HM01			HM02			HM03			
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	
Summer Flounder	HM02				29.5	250	250				
	HM03							33	400	400	
								43	850	850	
								20.5	90	90	
								24	120	120	
								+ 13 collected, no length or weight			
		COUNT			1			1	17	4	
		AVERAGE			29.5			250	30.125	385	
		MAXIMUM			29.5			250	43	850	
		MINIMUM			29.5			250	20.5	90	
Black Drum	HM02				28	350	350				
		COUNT			1			1			
		AVERAGE			28			350			
		MAXIMUM			28			350			
		MINIMUM			28			350			
Spotted Sunfish	HM02				15.5	65	65				
					17	110	110				
		COUNT			2			2			
		AVERAGE			16.25			87.5			
		MAXIMUM			17			110			
Largemouth Bass	HM02				34	540	540				
		COUNT			1			1			
		AVERAGE			34			540			
		MAXIMUM			34			540			
		MINIMUM			34			540			
Hogchoker	HM03										
								6	10	10	
		+ 1 collected, no length or weight									
		COUNT						2		1	
		AVERAGE						6		10	
Spot	HM03										
								5	<5	2.5	
								12	25	25	
								5.8	20	4	
								6		4	
								6.2		4	
								6.4		4	
								6.4		4	
		+ 1 collected, no length or weight									
		COUNT						6		7	
	AVERAGE						6.82857143		6.78571429		
	MAXIMUM						12		25		
	MINIMUM						5		2.5		
Blue Gill	HM02				17		105				
	HM01	10.5	10	10							
		+ 1 collected, no length or weight									
		COUNT	2		1	1		1			
		AVERAGE	10.5		10	17		105			

HOLLAND MILL CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	HM01			HM02			HM03			
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	
Ineed	HM02				15	50		50			
					11.5	30		30			
	HM01	7.5	45	4.5							
		6.5		4.5							
		7.5		4.5							
		7.5		4.5							
		6		4.5							
		6		4.5							
		4.5		4.5							
		8.5		4.5							
		8		4.5							
		5.5		4.5							
		8	50	8.3							
		8.5		8.3							
		6.5		8.3							
		8.5		8.3							
11		8.3									
7.5		8.3									
	COUNT	16		16	2		2				
	AVERAGE	7.34375		5.925	13.25		40				
	MAXIMUM	11		8.3	15		50				
	MINIMUM	4.5		4.5	11.5		30				
Long-nose Gar	HM02				73	1250		1250			
					83	2000		2000			
					72.5	1640		1640			
		COUNT				3		3			
		AVERAGE				76.1666667		1630			
		MAXIMUM				83		2000			
		MINIMUM				72.5		1250			
	Pinfish	HM02				17.5	80		80		
		HM03							5	<5	2.5
						+5 collected, no length or weight			+3 collected, no length or weight		
		COUNT				7		1	4	1	
		AVERAGE				17.5		80	5	2.5	
		MAXIMUM				17.5		80	5	2.5	
		MINIMUM				17.5		80	5	2.5	
Gizzard Shad	HM02				33	460		460			
					34	460		460			
		COUNT				2		2			
		AVERAGE				33.5		470			
		MINIMUM				33		460			
Chain Pickerel	HM01	13	10	5							
		13.5		5							
		COUNT	2		2						
		AVERAGE	13.25		5						
		MAXIMUM	13.5		5						
		MINIMUM	13		5						
Unknown Fish	HM01	7.5	<5	2.5							
		COUNT	1		1						
		AVERAGE	7.5		2.5						
		MAXIMUM	7.5		2.5						
		MINIMUM	7.5		2.5						
Swamp Darter	HM01	6	18	3							
		6		3							
		6		3							
		6		3							
		6		3							
		6		3							
		6		3							
		COUNT	6		6						
		AVERAGE	6		3						
		MAXIMUM	6		3						
		MINIMUM	6		3						

HOLLAND MILL CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	HM01			HM02			HM03		
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)
Crayfish	HM01	8.5		15	5					
		4.5			5					
		5.5			5					
		<b>COUNT</b>		3		3				
		<b>AVERAGE</b>		6.1666667		5				
		<b>MAXIMUM</b>		8.5		5				
		<b>MINIMUM</b>		4.5		5				
Mud Sunfish	1 collected at HM01, no length or weight									
Mummichog	6 collected at HM02, no length or weight									
Goby, freshwater	1 collected at HM01 and 1 collected at HM02, no length or weight									
Gras shrimp	13 collected at HM02, no length or weight									

WEBB CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	WC02			WC03		
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)
Strippet Mullet	WC02	39.5	500	500			
		35.5	380	380			
		41.5	700	700			
		37	600	600			
	COUNT	4		4			
AVERAGE	38.375		545				
MAXIMUM	41.5		700				
MINIMUM	35.5		380				
Summer Flounder	WC03				21	60	60
					1		1
					21		60
					21		60
	MINIMUM			21		60	
Largemouth Bass	WC02	34	525	525			
		34	600	600			
	COUNT	2		2			
AVERAGE	34		562.5				
MAXIMUM	34		600				
MINIMUM	34		525				
Chestnut Sunfish	WC02	16	60	60			
	COUNT	1		1			
AVERAGE	16		60				
MAXIMUM	16		60				
MINIMUM	16		60				
White Catfish	WC02	37	750	750			
	COUNT	1		1			
AVERAGE	37		750				
MAXIMUM	37		750				
MINIMUM	37		750				
Spot	WC02	14.5	10	10			
		13	10	10			
		13	<10	5			
		+1 collected, no length or weight					
COUNT	4		4				
AVERAGE	13.5		8.33333333				
MAXIMUM	14.5		10				
MINIMUM	13		5				
Blue Gill	WC02	23	300	300			
		23.5	300	300			
		21.5	250	250			
		16.75	85	85			
	COUNT	4		4			
AVERAGE	21.1875		233.75				
MAXIMUM	23.5		300				
MINIMUM	16.75		85				

WEBB CREEK - BACKGROUND STATIONS

SPECIES	COC SAMPLE NO.	WC02			WC03			
		Fish Length (cm)	Mass Weight	Average Weight (g)	Fish Length (cm)	Mass Weight	Average Weight (g)	
Long-nose Gar	WC02	68	1100	1100				
		71.5	1220	1220				
		73.5	1350	1350				
		72.5	1220	1220				
		66.5	1120	1120				
		72.5	1260	1260				
		71.5	1340	1340				
		69.5	1240	1240				
		75	1420	1420				
		WC03				87	1900	1900
						83	1850	1850
						97	2850	2850
						71.5	1000	1000
						73	1580	1580
		COUNT	9	9	5	5		
		AVERAGE	71.16667	1252.222	82.3	1836		
		MAXIMUM	75	1420	97	2850		
		MINIMUM	66.5	1100	71.5	1000		
Pinfish	WC02	10.5	NA					
		+24 collected, no length or weight			24 collected, no length or weight			
						24		
Yellow Bullhead Catfish	WC02	38.5	900	900				
		32.5	620	620				
		36.5	640	640				
		COUNT	3	3				
		AVERAGE	35.83333	720				
		MAXIMUM	38.5	900				
		MINIMUM	32.5	620				
Mudcat	3 fish collected at WC02, no length or weight							
Mummichog	3 fish collected at WC03, no length or weight							
Grass shrimp	3 collected at WC03, no length or weight							

**Benthic Macroinvertebrate  
Characterization and Statistics**

**SUMMARY STATISTICS OF BENTHIC MACROINVERTEBRATE SPECIES AT  
HADNOT CREEK, HOLLAND MILL CREEK, AND WEBB CREEK  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Station	Number of Species	Number of Organisms	Species Density (#/m <sup>2</sup> )	Species Diversity (Shannon-Weiner)	Species Diversity (Brillouin's)	Macroinvertebrate Biotic Index
WC02	7	79	504	0.570	0.518	9.4
WC03	7	74	472	0.323	0.279	9.6
HC01	20	286	1,823	0.802	0.755	7.8
HC02	4	79	504	0.196	0.072	7.6
HC03	8	244	1,555	0.683	0.675	NA
HC04	13	165	1,052	0.807	0.757	7.6
HM01	13	345	2,199	0.525	0.500	6.9
HM02	4	404	2,575	0.128	0.122	9.6
HM03	7	97	618	0.538	0.497	9.6

WC = Webb Creek Stations

HC = Hadnot Creek Stations

HM = Holland Mill Creek Stations

BN = Benthic Macroinvertebrate Sample

NA = Not Applicable

Species Density (#/m<sup>2</sup>) is based on a sample area of 0.0523 m<sup>2</sup>.

**SYSTEMATIC LIST OF BENTHIC MACROINVERTEBRATE SPECIES  
AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals
<b>NERMERTEA</b>	Phylum
Anopla	Class
Heteronemertea	Order
Lineidae	Family
<i>Micrura leidyl</i>	Genus Species
<b>ANNELIDA</b>	Phylum
Oligochaeta	Class
Lumbriculida	Order
Lumbriculiae	Family
<i>Eclipidrillus sp.</i>	Genus Species
Tubificida	Order
Tubificidae	Family
<i>Isochaetides freyi</i>	Genus Species
<i>Limnodrilus hoffmeisteri</i>	Genus Species
<i>Spirosperma carolinensis</i>	Genus Species
Polychaeta	Class
Ariciida	Order
Orbiniidae	Family
<i>Scoloplos fragilis</i>	Genus Species
Capitellida	Order
Capitellidae	Family
<i>Heteromestus filiformis</i>	Genus Species
Phyllodocida	Order
Nereidae	Family
<i>Nereis succinea</i>	Genus Species
Phyllodocidae	Family
<i>Eteone heteropoda</i>	Genus Species
Spionida	Order
Spionidae	Family
<i>Scolecoides viridis</i>	Genus Species
<i>Streblospio benedicti</i>	Genus Species
Terebellida	Order



**SYSTEMATIC LIST OF BENTHIC MACROINVERTEBRATE SPECIES  
AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals
Ampharetidae	Family
<i>Hypaniola grayi</i>	Genus Species
<b>ARTHROPODA</b>	Phylum
Crustacea	Class
Amphipoda	Order
Corophiidae	Family
<i>Corophium lacustris</i>	Genus Species
Gammaridae	Family
<i>Crangonyx pseudogracillus</i>	Genus Species
<i>Gammarus tigrinus</i>	Genus Species
Tanaidacea	Order
Tanaidae	Family
<i>Leptochelia rapax</i>	Genus Species
Decapoda	Order
Palaemonidae	Family
<i>Palaemonetes pugio</i>	Genus Species
Insecta	Class
Coleoptera	Order
Dytiscidae	Family
<i>Hydroporus sp.</i>	Genus Species
Elmidae	Family
<i>Dubiraphia sp.</i>	Genus Species
Diptera	Order
Ceratopogonidae	Family
<i>Palpomyia/sphaeromyia sp.</i>	Genus Species
Chaoboridae	Family
<i>Chaoborus sp.</i>	Genus Species
Chironomidae	Family
<i>Ablabesmyia annulata</i>	Genus Species
<i>Ablabesmyia mallochii</i>	Genus Species
<i>Ablabesmyia ramphe gr.</i>	Genus Species
<i>Clinotanytus pinguis</i>	Genus Species
<i>Chironomus decorus gr.</i>	Genus Species

SYSTEMATIC LIST OF BENTHIC MACROINVERTEBRATE SPECIES  
 AT BACKGROUND STATIONS  
 (WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
 MCB CAMP LEJEUNE, NORTH CAROLINA

Species	USEPA <sup>(1)</sup> Metals
<i>Cryptochironomus fulvus gr</i>	Genus Species
<i>Dicrotendipes nervosus</i>	Genus Species
<i>Epoicladius sp.</i>	Genus Species
<i>Glyptotendipes sp.</i>	Genus Species
<i>Larsia sp.</i>	Genus Species
<i>Nilothauma sp.</i>	Genus Species
<i>Paraiauterborniella nigrohaite</i>	Genus Species
<i>Polypedilum illinoense</i>	Genus Species
<i>Polypedilum scalaenum</i>	Genus Species
<i>Procladius sp.</i>	Genus Species
<i>Tanytarsus sp.</i>	Genus Species
<i>Tribelos jucundum</i>	Genus Species
<i>Tribelos lucundum</i>	Genus Species
Tipulidae	Family
<i>Psuedolimnophila sp.</i>	Genus Species
Ephemeroptera	Order
Ephemeridae	Family
<i>Hexagenia billineata</i>	Genus Species
Megaloptera	Order
Sialidae	Family
<i>Sialis sp.</i>	Genus Species
Odonata	Order
Coenagrionidae	Family
<i>Argia sp.</i>	Genus Species
Libelluliidae	Family
<i>Pechydiplax longipennis</i>	Genus Species
Trichoptera	Order
Polycentropodidae	Family
<i>Phylacentropus sp.</i>	Genus Species
<b>MOLLUSCA</b>	Phylum
Bivalvia	Class
Mytiloidea	Order
Mytilidae	Family

SYSTEMATIC LIST OF BENTHIC MACROINVERTEBRATE SPECIES  
 (AT BACKGROUND STATIONS  
 (WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
 MCB CAMP LEJEUNE, NORTH CAROLINA

Species	USEPA <sup>(1)</sup> Metals
<i>Geukensia demissa</i>	Genus Species
Veneroida	Order
Corbiculidae	Family
<i>Polymesoda caroliniana</i>	Genus Species
Mactridae	Family
<i>Mullinia lateralis</i>	Genus Species
Sphaeriidae	Family
<i>Pisidium casertanum</i>	Genus Species
Tellinidae	Family
<i>Macoma tenta</i>	Genus Species

**USEPA SENSITIVITY TO METALS AND TOLERANCE TO ORGANIC WASTE AND BIOTIC INDEX  
FOR BENTHIC MACROINVERTEBRATE SPECIES AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals	Organics	NCDEHNR <sup>(2)</sup> Biotic Index
NERMERTEA			
Anopla			
Heteronemertea			
Lineidae			
<i>Micrura leidyl</i>	NA	NA	NA
ANNELIDA			
Oligochaeta			
Lumbriculida			
Lumbriculiae			
<i>Eclipidrilus sp.</i>	NA	NA	NA
Tubificida			
Tubificidae			
<i>Isochaetides freyi</i>	NA	NA	8.6
<i>Limnodrilus hoffmeisteri</i>	NA	5	9.4
<i>Spirosperma carolinensis</i>	NA	3	NA
Polychaeta			
Ariciida			
Orbiniidae			
<i>Scoloplos fragilis</i>	NA	NA	NA
Capitellida			
Capitellidae			
<i>Heteromestus filiformis</i>	NA	NA	NA
Phyllodocida			
Nereidae			
<i>Nereis succinea</i>	NA	NA	NA
Phyllodocidae			
<i>Eteone heteropoda</i>	NA	NA	NA
Spionida			
Spionidae			
<i>Scolecopides virdis</i>	NA	NA	NA
<i>Streblospio benedicti</i>	NA	NA	NA
Terebellida			

**USEPA SENSITIVITY TO METALS AND TOLERANCE TO ORGANIC WASTE AND BIOTIC INDES  
FOR BENTHIC MACROINVERTEBRATE SPECIES AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals	Organics	NCDEHNR <sup>(2)</sup> Biotic Index
Ampharetidae			
<i>Hypaniola grayi</i>	NA	NA	NA
ARTHROPODA			
Crustacea			
Amphipoda			
Corophiidae			
<i>Corophium lacuatre</i>	NA	NA	NA
Gammaridae			
<i>Crangonyx pseudogracillus</i>	NA	NA	7.9
<i>Gammarus tigrinus</i>	NA	2	NA
Tanaidacea			
Tanaidae			
<i>Leptochelia rapox</i>	NA	NA	NA
Decapoda			
Palaemonidae			
<i>Palaemonetes pugio</i>	NA	NA	NA
Insecta			
Coleoptera			
Dytiscidae			
<i>Hydroporus sp.</i>	NA	NA	8.6
Elmidae			
<i>Dubiraphia sp.</i>	NA	NA	5.9
Diptera			
Ceratopogonidae			
<i>Palpomyia/sphaeromias sp.</i>	NA	NA	7.0
Chaoboridae			
<i>Chaoborus sp.</i>	NA	NA	8.5
Chironomidae			
<i>Ablabesmyia annulata</i>	NA	1	3.5
<i>Ablabesmyia mallochi</i>	S	2	7.2
<i>Ablabesmyia ramphe gr.</i>	NA	2	NA
<i>Clinotanypus pinguis</i>	S	3	8.7

**USEPA SENSITIVITY TO METALS AND TOLERANCE TO ORGANIC WASTE AND BIOTIC INDICES  
FOR BENTHIC MACROINVERTEBRATE SPECIES AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals	Organics	NCDEHNR <sup>(2)</sup> Biotic Index
<i>Chironomus decorus gr.</i>	NA	NA	9.6
<i>Cryptochironomus fulvus gr</i>	NA	3	6.4
<i>Dicrotendipes nervosus</i>	S	2	9.7
<i>Epoicladius sp.</i>	NA	NA	0.0
<i>Glyptotendipes sp.</i>	NA	NA	9.4
<i>Larsia sp.</i>	NA	2	9.3
<i>Nilothauma sp.</i>	NA	NA	5.0
<i>Paraiauteroborniella nigrohaite</i>	NA	NA	NA
<i>Polypedilum illinoense</i>	NA	3	9.0
<i>Polypedilum scalaenum</i>	NA	2	8.4
<i>Procladius sp.</i>	NA	NA	9.1
<i>Tanytarsus sp.</i>	NA	NA	6.7
<i>Tribelos jucundum</i>	S	1	6.3
<i>Tribelos lucundum</i>	NA	NA	6.3
Tipulidae			
<i>Psuedolimnophila sp.</i>	NA	NA	7.2
Ephemeroptera			
Ephemeridae			
<i>Hexagenia billineata</i>	NA	2	NA
Megaloptera			
Sialidae			
<i>Sialis sp.</i>	T	4	7.2
Odonata			
Coenagrionidae			
<i>Argia sp.</i>	NA	NA	8.2
Libellulidae			
<i>Pechydiplax longipennis</i>	NA	NA	NA
Trichoptera			
Polycentropodidae			
<i>Phylacentropus sp.</i>	NA	NA	6.2
MOLLUSCA			
Bivalvia			

**USEPA SENSITIVITY TO METALS AND TOLERANCE TO ORGANIC WASTE AND BIOTIC INDES  
FOR BENTHIC MACROINVERTEBRATE SPECIES AT BACKGROUND STATIONS  
(WEBB, HADNOT, AND HOLLAND MILL CREEKS)  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Species	USEPA <sup>(1)</sup> Metals	Organics	NCDEHNR <sup>(2)</sup> Biotic Index
Mytiloidea			
Mytilidae			
<i>Geukensia demissa</i>	NA	NA	NA
Veneroidea			
Corbiculidae			
<i>Polymesoda caroliniana</i>	NA	NA	NA
Mactridae			
<i>Mullinia lateralis</i>	NA	NA	NA
Sphaeriidae			
<i>Pisidium casertanum</i>	NA	4	6.5
Tellinidae			
<i>Macoma tenta</i>	NA	NA	NA

<sup>(1)</sup> Macroinvertebrate Field and Laboratory Methods for Evaluating the Biological Integrity of Surface Waters

<sup>(2)</sup> Lenat, 1993

NA = Not Available

S = Sensitive to heavy metals

T = Tolerant to heavy metals

Organics Ranking = 0 to 5 with 0 being the least tolerant

**Sampling Station  
Location Maps**



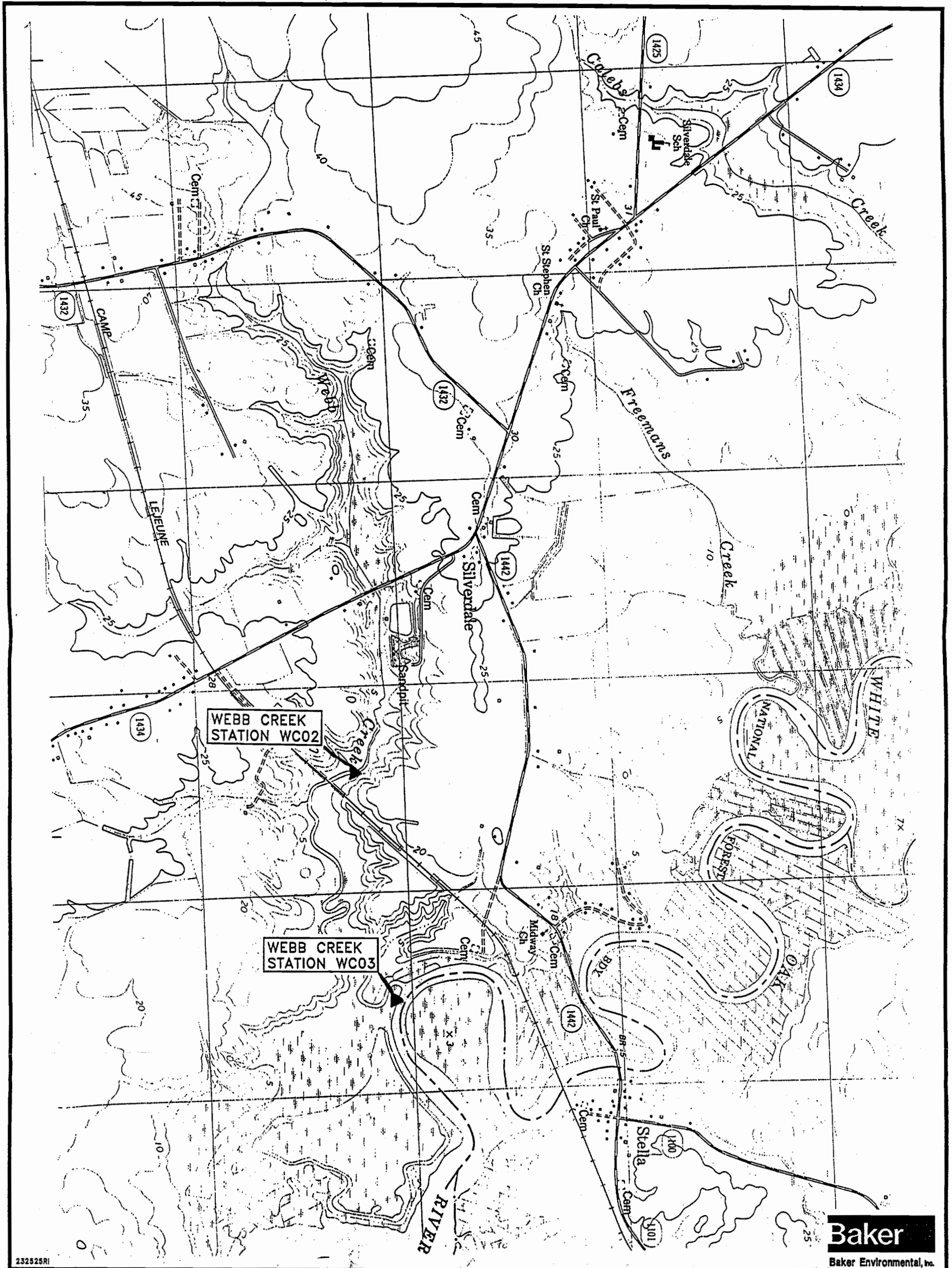


FISH AND BENTHIC MACROINVERTEBRATE  
 SAMPLING LOCATION IN HOLLAND MILL CREEK

MARINE CORPS BASE, CAMP LEJEUNE  
 NORTH CAROLINA

SOURCE: N.C. DIVISION OF MARINE  
 FISHERIES, REPORT AFC-9, NOV. 1975.

01763WB12



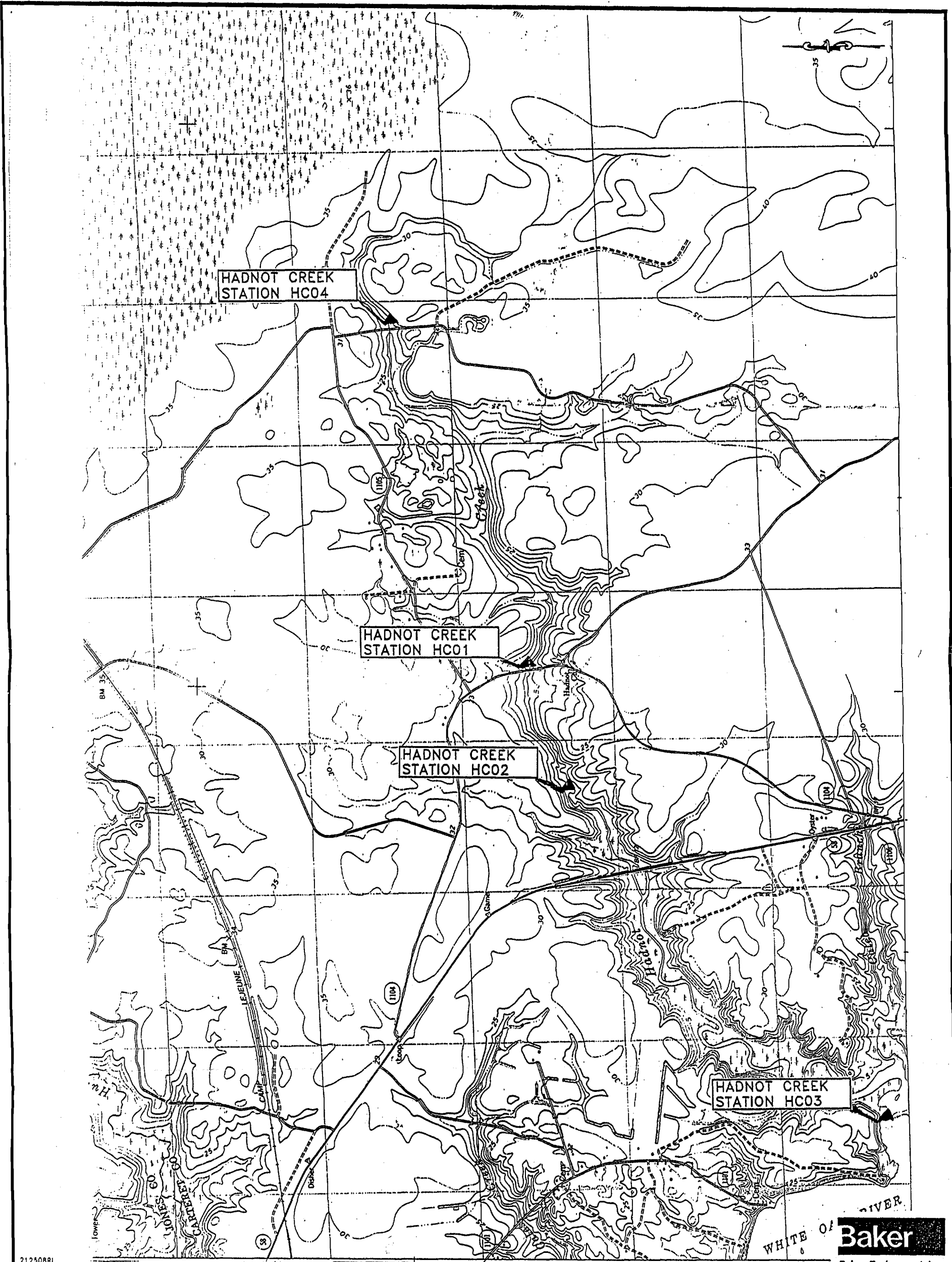
232825R1

**Baker**  
Baker Environmental, Inc.

FISH AND BENTHIC MACROINVERTEBRATE  
SAMPLING LOCATION IN WEBB CREEK

MARINE CORPS BASE, CAMP LEJEUNE  
NORTH CAROLINA

SOURCE: N.C. DIVISION OF MARINE  
FISHERIES, REPORT AFC-9, NOV. 1975.



FISH AND BENTHIC MACROINVERTEBRATE  
SAMPLING LOCATION IN HADNOT CREEK

MARINE CORPS BASE, CAMP LEJEUNE  
NORTH CAROLINA

SOURCE: N.C. DIVISION OF MARINE  
FIDHERIES, REPORT AFC-9, NOV. 1975.

## REFERENCE

Baker, 1994. Baker Environmental Inc., 1994. "Supplemental Aquatic Survey for Wallace Creek and Bearhead Creek". Prepared for the Department of the Navy, Naval Facilities Engineering Command, Atlantic Division, Norfolk, Virginia.

MARINE CORPS BASE CAMP LEJEUNE  
GROUND - HADNOT CREEK  
-IC MACROINVERTEBRATES

	HM01-BN			HM02-BN			HM03-BN		
	01	02	03	01	02	03	01	02	03
<b>NEMERTEA</b>									
Anopla									
Heteronemertea									
Lineidae									
• Micrura leidy							3	4	2
<b>ANNELIDA</b>									
Oligochaeta									
Tubificida									
Tubificidae									
Limnodrilus hoffmeisteri	3	1	3						
Polychaeta									
Ariciida									
Orbinidae									
• Scoloplos fragilis							3	20	8
Capitellida									
Capitellidae									
Heteromastus filiformis							1	1	1
Phyllodocida									
Nereidae									
Nereis succinea				7	9	6			
Spionida									
Spionidae									
• Streblospio benedicti							1		
Terebellida									
Ampharetidae									
Hypaniola grayi (ampharetid worm)				3		2			
<b>ARTHROPODA</b>									
Crustacea									
Decapoda									
Palaemonidae									
Palaemonetes pugio									1
Insecta									
Coleoptera									
Dytiscidae									
Hydroporus sp.	1								
Elmidae									
Dubiraphis sp.			8						
Diptera									
Chaoboridae									
Chaoborus sp.			1						
Chironomidae									
Ablabesmyia mallochi	1								
Chironomus decorus gr.	2	2	2	120	180	76	1		
Dicrotendipes nervosus	5		3						
Larsia sp.			1						
Polypedium illinoense	12		7						
Polypedium scalaenum	18		11						
Tanytarsus sp.	11		12						
Tribelos lucundum	50	159	31						
Megaloptera									
Sialidae									
Sialis sp.	1								
<b>MOLLUSCA</b>									
Bivalvia									
Veneroida									
Mactridae									
• Mullinia lateralis							3		
Tellinidae									
Macoma tenta							17	23	9
<b>Total Taxa</b>	10	3	10	3	2	4	7	4	4
<b>Total Specimens</b>	104	162	79	130	189	85	29	48	20
<b>Replicate Specimens Average</b>		115			134.667			32.3333	
<b>Standard Deviation</b>	15.0864	90.934	9.06091	66.4254	120.915	36.5639	5.75698	11.1056	4.08248
<b>Pielou's Diversity</b>		0.5			0.122			0.497	
<b>SPECIES DENSITY (#/M<sup>2</sup>)</b>	663	1033	504	829	1205	542	185	306	127
<b>SPECIES DIVERSITY (Shannon-Wiener)</b>	0.695	0.045	0.793	0.138	0.083	0.186	0.593	0.436	0.460

MARINE CORP'S BASE CAMP LEJEUNE  
 BACKGROUND - HADNOT CREEK  
 BENTHIC MACROINVERTEBRATES

	HC01-BN			HC02-BN			HC03-BN			HC04-BN		
	01	02	03	01	02	03	01	02	03	01	02	03
<b>HEMERTERA</b>												
Annelida												
Heteromermis												
Linnidae												
<i>Micrura leidy</i>												
						6	5	3				
<b>ANNELIDA</b>												
Oligochaeta												
Lumbriculidae												
<i>Lumbriculus</i>												
<i>Ecipitricus</i> sp.												
			1									
Tubificidae												
<i>Boechetidae</i> Frey												
	77	42	36						21	21	8	
<i>Limnodrilus hoffmeisteri</i>												
										1		
<i>Sphaerisma carolinensis</i>												
			3							1	3	
Polychaeta												
Caprellidae												
<i>Heteromastus filiformis</i>												
							14	8				
Phyllodoctidae												
<i>Nereis succinea</i>												
							6		18			
Phyllodoctidae												
<i>Elisone heteropoda</i>												
										1		
Terebellidae												
<i>Hypanolis grayi</i> (ampharetid worm)												
				18	6	46						
<b>ARTHROPODA</b>												
Crustacea												
Amphipoda												
Corophiidae												
<i>Corophium lacustris</i>												
									82			
Gammaridae												
<i>Gammarus pseudogranicus</i>												
				1	1					15	20	
<i>Gammarus tigrinus</i>												
Tanaidacea												
<i>Leptochelia rapax</i>												
									80			
Insecta												
Coleoptera												
Dytiscidae												
<i>Hydroporus</i> sp.												
			1						5	2	6	
Elmidae												
<i>Dubiraphis</i> sp.												
			1									
Diptera												
Chironomidae												
<i>Falsipomphaliphacromis</i> sp. (biting midges)												
	5	7	4			1						
Chironomidae												
<i>Ababotrypa annulata</i>												
	2	7	1									
<i>Ababotrypa ruxpelti</i> gr.												
	4	7	9									
<i>Clinotrypax pinguis</i>												
<i>Cryptochironomus fulvus</i> gr.												
			2			3				1		
<i>Epeletidius</i> sp.												
						1						1
<i>Glyptotendipes</i> sp.												
<i>Nitidulax</i> sp.												
			2			1						
<i>Paralelterbonella nigrohalterata</i>												
	1	5	2									
<i>Polydora</i> binocosa												
	3	1										
<i>Fraxellus</i> sp. (midges)												
			1									
<i>Tanytarsus</i> sp.												
	2	8	2									
<i>Triboles lucidus</i>												
	4	8	8							8	8	
Tipulidae												
<i>Pseudolimnophila</i> sp.												
										1	2	
Ephemeroptera												
Ephemeridae												
<i>Hexagenia bilineata</i>												
	3	3	1									
Megaloptera												
Sialisidae												
<i>Sialis</i> sp.												
									1			
Odonata												
Coenagrionidae												
<i>Argia</i> sp.												
			1									
Libellulidae												
<i>Pachydiplax longipennis</i>												
										1		
Trichoptera												
Polycentropodidae												
<i>Phyllocentropus</i> sp.												
	1	5	7							17	13	4
<b>MOLLUSCA</b>												
Bivalvia												
Mytilidae												
<i>Mytilus</i>												
												1
<i>Gouldensis demissa</i>												
Veneridae												
Sphaeridae												
<i>Psidium caerulatum</i>												
			2	1							4	
Tellinidae												
<i>Macoma benta</i>												
							5	18	1			
<b>TOTAL TAXA</b>												
	10	17	15	1	2	4	4	3	6	4	11	8
<b>TOTAL SPECIMENS</b>												
	102	106	78	18	7	54	30	31	183	44	89	32
<b>SPECIENS SPECIMENS AVERAGE</b>												
		95.33333			26.33333			81.33333			55	
<b>STANDARD DEVIATION</b>												
	23.50792	8.614623	8.961824	NA	3.535534	21.79449	4.258699	8.082904	29.67241	8.321905	7.128687	6.047432
<b>SHANNON'S DIVERSITY</b>												
		0.735			0.072			0.675			0.757	
<b>SPECIES DENSITY (1/M^2)</b>												
	650	676	497	113	45	344	191	198	1166	280	443	331
<b>SPECIES DIVERSITY (Shannon-Wiener)</b>												
	0.463	0.956	0.831	0.000	0.178	0.230	0.554	0.384	0.448	0.458	0.833	0.763

MARINE CORPS BASE CAMP LEJEUNE  
 KGROUND - WEBB CREEK  
 BENTHIC MACROINVERTEBRATES

	WC02-BN			WC03-BN		
	01	02	03	01	02	03
NEMERTEA						
Anopla						
Heteronemertea						
Lineidae						
• <i>Micrura leidyi</i>				1	2	2
ANNELIDA						
Polychaeta						
Capitellida						
Capitellidae						
<i>Heteromestus filiformis</i>	2					
Phyllodocida						
Nereidae						
<i>Nereis succinea</i>			1			
Spionida						
Spionidae						
• <i>Scolecopides viridis</i>						1
Terebellida						
Ampharetidae						
<i>Hypaniola grayi</i>		4	10			
TROPODA						
Crustacea						
Amphipoda						
Gammaridae						
• <i>Gammarus tigrinus</i>	10			1	1	
Insecta						
Diptera						
Chironomidae						
<i>Chironomus decorus</i> gr.	8	24	13	38	17	6
• <i>Procladius</i> sp.	1	3		2		1
<i>Tanytarsus</i> sp.		2	1			
MOLLUSCA						
Bivalvia						
Veneroida						
Corbiculidae						
• <i>Polymesoda caroliniana</i>					1	
Tellinidae						
<i>Macoma tenta</i>					1	
Total Taxa	4	4	4	4	5	4
Total Specimens	21	33	25	42	22	10
Replicate Specimens Average		26.33			24.67	
Standard Deviation	4.42531	10.5317	6.18466	18.3394	7.05691	2.38048
Brillouin's Diversity		0.518			0.279	
SPECIES DENSITY (#/M <sup>2</sup> )	134	210	159	268	143	64
SPECIES DIVERSITY (Shannon-Wiener)	0.473	0.380	0.419	0.180	0.304	0.473

**APPENDIX S**  
**SAMPLING STATION CHARACTERIZATION DATA SHEETS**



SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR1-SW/SD Date: 8/20/92 Time: 12:15  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kommerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, New River, sampling location 1, downstream

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: grasses, hedges, wetland trees, spanish moss, pines, hardwood  
 Estimated Stream Width: NE m Est. Stream Depth: 0.61 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: Clay-like

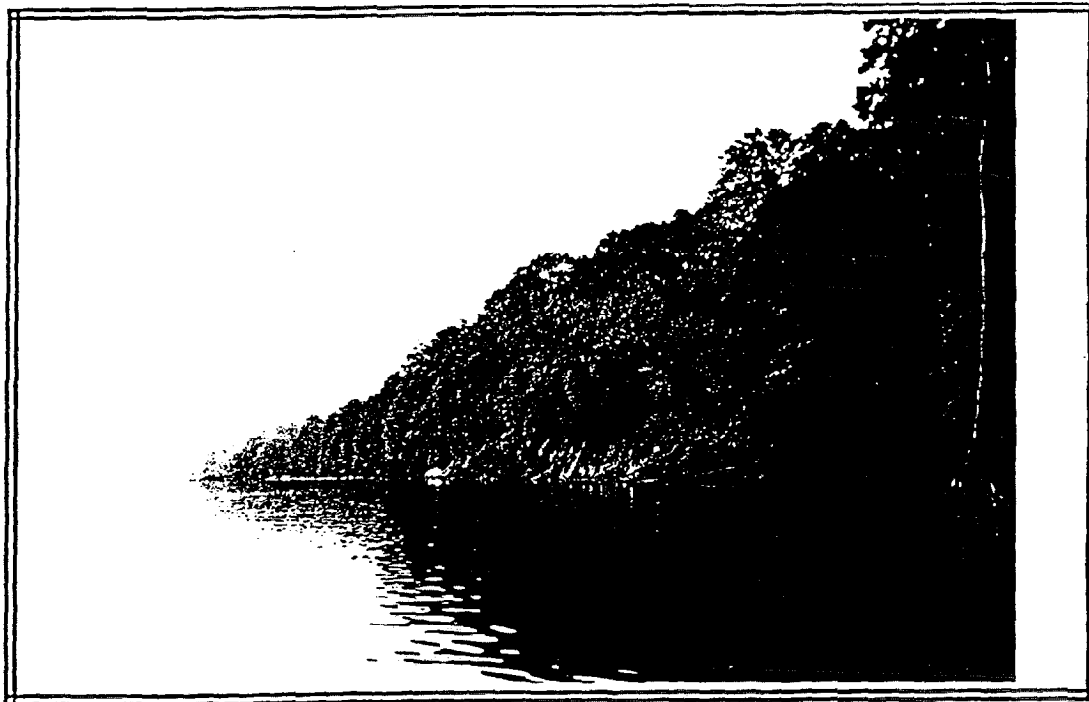
Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Cloudy, Approx. 21°C Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR2-30/SD Date: 8/20/92 Time: 11:50  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, New River, Station 2, Upstream

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: 0.61 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: uniform, gray color

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Approx. 21°C Tide: In Out

Comments: Sediment resampled 9/14/92 @ 15:45, silty clay, organic mottle towards the top; NA= Not Applicable; NE= Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-DR3-SW/SD Date: 8/26/92 Time: 11:15  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, New River, Station 3, towards bank

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: 0.61 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: Clay-like, mottled

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Cloudy, approx. 21°C, storm coming in Tide: In Out

Comments: NA = Not applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR1-fish Date: 9/11/92 Time: 08:45  
9/14/92 Time: 11:05  
 Sample Type: Fish Benthic Macroinvertebrate 9/13/92 Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Shovel

Shellfish

Refer to 69-NR1-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: NE

Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE

Weather Conditions: NE Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR2-Fish Date: 9/11/92 Time: 10:00  
9/14/92 Time: 10:24  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-NR2-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE  
 Weather Conditions: Sunny Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR2-Fish Date: 9/13/92 Time: 10:30  
 Sample Type: Small Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Shovel

Refer to 69-NR2-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: NE

Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE

Weather Conditions: Partly Sunny, Windy Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR3-fish Date: 9/10/92 Time: 16:10  
Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other:  
9/10 + 9/14/92 9/11/92

Refer to NR-NR3-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other:

Vegetation Type:

Estimated Stream Width: m Est. Stream Depth: m Riffle: m Run: m Pool: m

Stream Type: Cold Water Warm Water Velocity: Channelized: Yes No

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other:

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: Replicate #2: Replicate #3:

Sediment Description:

Water:

Temp. Surface: C Dissolved Oxygen Surface: mg/L pH Surface: S.U.

Temp. Bottom: C Dissolved Oxygen Bottom: mg/L pH Bottom: S.U.

Conductivity Surface: Micromhos/cm Salinity Surface: ppt Secchi Disc Surface: m

Conductivity Bottom: Micromhos/cm Salinity Bottom: ppt Secchi Disc Bottom: m

Water Odors: Normal Sewage Petroleum Chemical Other:

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color:

Weather Conditions: Tide: In Out

Comments:

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR1-BN Date: 8/19/92 Time: 10:35  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-NR1-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: elephant grass, pine tree stands  
 Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 1 Replicate #2: 1 Replicate #3: 1  
 Sediment Description: shells, 1% sand, 99% silt

Water:

Temp. Surface: 27.0 C Dissolved Oxygen Surface: 5.5 mg/L pH Surface: 6.9 S.U.  
 Temp. Bottom: 27.5 C Dissolved Oxygen Bottom: 6.8 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 14,200 Micromhos/cm Salinity Surface: 8.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 18,000 Micromhos/cm Salinity Bottom: 10.0 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny; Approx. 29°C Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated



SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR2-BN Date: 8/19/92 Time: 09:25  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-NR2-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: Three horizons of terrestrial sp.  
 Estimated Stream Width: NE m Est. Stream Depth: 0.6 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: WE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded 25% cover

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 1 Replicate #2: 1 Replicate #3: 1  
 Sediment Description: 5% silt, 95% shells and sand

Water:

Temp. Surface: 26.9 C Dissolved Oxygen Surface: 6.6 mg/L pH Surface: 7.7 S.U.  
 Temp. Bottom: 26.9 C Dissolved Oxygen Bottom: 5.5 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 17,500 Micromhos/cm Salinity Surface: 10.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 20,000 Micromhos/cm Salinity Bottom: 12.0 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-NR3-BN Date: 8/18/92 Time: 15:26  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-NR3-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial other: w/ partial development  
 Vegetation Type: Phragmite grasses, evergreens, deciduous trees  
 Estimated Stream Width: 0.8 m Est. Stream Depth: 0.3 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: \_\_\_\_\_ Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 1 Replicate #2: 1 Replicate #3: 1  
 Sediment Description: High silt, some leaves, small shells, wood

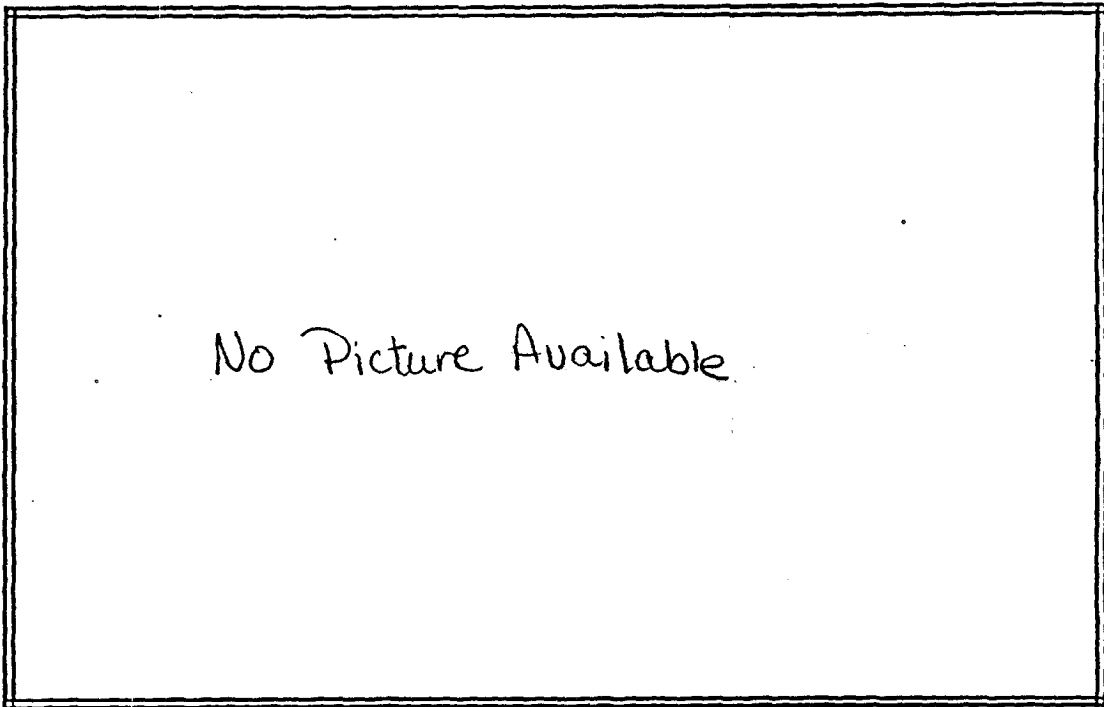
Water:

Temp. Surface: 30.8 C Dissolved Oxygen Surface: 9.1 mg/L pH Surface: 7.7 S.U.  
 Temp. Bottom: 30.1 C Dissolved Oxygen Bottom: 8.7 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 23,000 Micromhos/cm Salinity Surface: 14.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 23,000 Micromhos/cm Salinity Bottom: 13.0 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny, approx. 27°C Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC1-SW/SD Date: 9/16/92 Time: 09:50  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: conifers, hardwood  
 Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes No  
 Canopy Cover: Open Partly Open Partly Shaded Shaded 50%

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: Flocculent, soupy

Water:

Temp. Surface: 25.5 °C Dissolved Oxygen Surface: 0.4 mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE °C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 15,000 Micromhos/cm Salinity Surface: 10.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Cloudy, approx. 21°C Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC3-SW/SD Date: 8/20/92 Time: 10:30  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, Everett Creek, Station 3, Right Bank

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: grasses, hedges, wetland trees, spanish moss, pines, hardwood  
 Estimated Stream Width: NE m Est. Stream Depth: 0.9 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: \_\_\_ Replicate #2: \_\_\_ Replicate #3: \_\_\_  
 Sediment Description: \_\_\_\_\_

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Cloudy, approx. 21°C Tide: In Out

Comments: NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC4-SW/SD Date: 8/20/92 Time: 09:30  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, Everett Creek, Station 4, Right Bank

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: grasses, hedges, wetland trees, spanish moss, pines, hardwood  
 Estimated Stream Width: NE m Est. Stream Depth: 0.76 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: \_\_\_ Replicate #2: \_\_\_ Replicate #3: \_\_\_  
 Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: Approx 21°C Tide: In Out

Comments: Sediment resampled 9/14/92 @ 15:05 - sandy, little organic  
NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC2-fish Date: 9/10/92 Time: 09:45  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Electroshocker



Site 69, Everett Creek, Station 2, Upstream

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: NE

Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: NE

Water:

Temp. Surface: 29.0 C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: 5,000 Micromhos/cm Salinity Surface: 2.0 ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: None

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE

Weather Conditions: NE Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC3-fish Date: 9/14/92 Time: 07:46  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-EC3-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE  
 Weather Conditions: Sunny, approx. 16°C Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC4-Fish Date: 9/10/92 Time: 14:30

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water shellfish  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: shore 9/13/93  
9/10/92 9/11/92 9/14/92

Refer to 69-EC4-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: NE

Estimated Stream Width: NE m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: None

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: NE

Weather Conditions: NE Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated



SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-ECA-BN Date: 8/18/92 Time: 11:50  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-ECA-fish

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: Evergreens/hardwood  
 Estimated Stream Width: 9.1 m Est. Stream Depth: 1.4 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes  No \_\_\_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded 590

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 4 Replicate #2: 2 Replicate #3: 3  
 Sediment Description: Sand

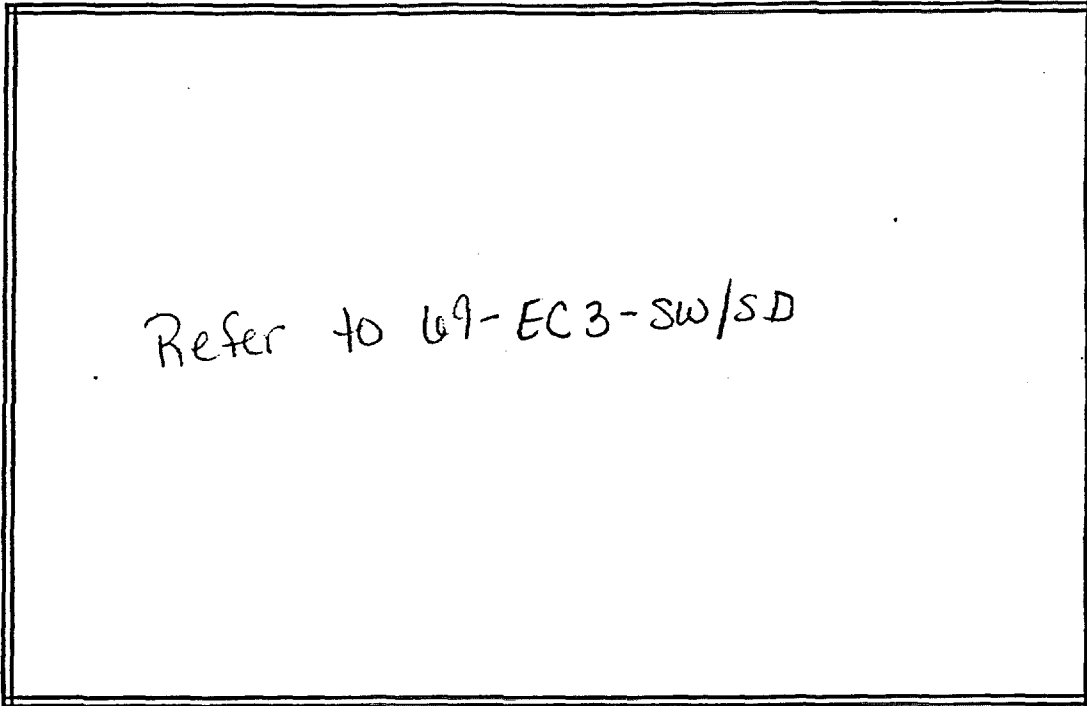
Water:

Temp. Surface: 23° C Dissolved Oxygen Surface: 5.85 mg/L pH Surface: 3.8 S.U.  
 Temp. Bottom: 22.2° C Dissolved Oxygen Bottom: 5.8 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 79 Micromhos/cm Salinity Surface: 0.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 98 Micromhos/cm Salinity Bottom: 0.0 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny, Approx. 27°C Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC3-BN Date: 8/18/92 Time: 13:11  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: Evergreens

Estimated Stream Width: 76.2 m Est. Stream Depth: 1.7 m Riffle: NE m Run: NE m Pool: NE m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes  No

Canopy Cover: Open Partly Open Partly Shaded Shaded 59% cover

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 1 Replicate #2: 1 Replicate #3: 1

Sediment Description: silt (99%) ; Detritus (1%)

Water:

Temp. Surface: 26.8 °C Dissolved Oxygen Surface: 5.6 mg/L pH Surface: 5.6 S.U.

Temp. Bottom: 26.8 °C Dissolved Oxygen Bottom: 0.5 mg/L pH Bottom: NE S.U.

Conductivity Surface: 2,700 Micromhos/cm Salinity Surface: 1.5 ppt Secchi Disc Surface: NE m

Conductivity Bottom: 26,000 Micromhos/cm Salinity Bottom: 15.5 ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: None

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown

Weather Conditions: Sunny, Approx. 27°C Tide: In Out

Comments: NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-EC4-BN Date: 8/18/92 Time: 15:27  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-EC4-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: Grasses, evergreens, hardwoods  
 Estimated Stream Width: 45.7 m Est. Stream Depth: 1.2 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes  No \_\_\_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded 75% cover

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate #1: 5 Replicate #2: 3 Replicate #3: 4  
 Sediment Description: Sandy, oyster shells, twigs, organics, stones

Water:

Temp. Surface: 27.5 C Dissolved Oxygen Surface: 5.75 mg/L pH Surface: 6.0 S.U.  
 Temp. Bottom: 26.2 C Dissolved Oxygen Bottom: 5.15 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 4,000 Micromhos/cm Salinity Surface: 3.5 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 22,500 Micromhos/cm Salinity Bottom: 13.5 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny, Approx. 27°C Tide: In Out

Comments: NA = Not Applicable ; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UTI-SW/SD Date: 8/21/92 Time: 15:40  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: 15:40



Site 69, Unnamed tributary, Station 1

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: deciduous trees, foliage  
 Estimated Stream Width: 0.15 m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNU  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: clay sand

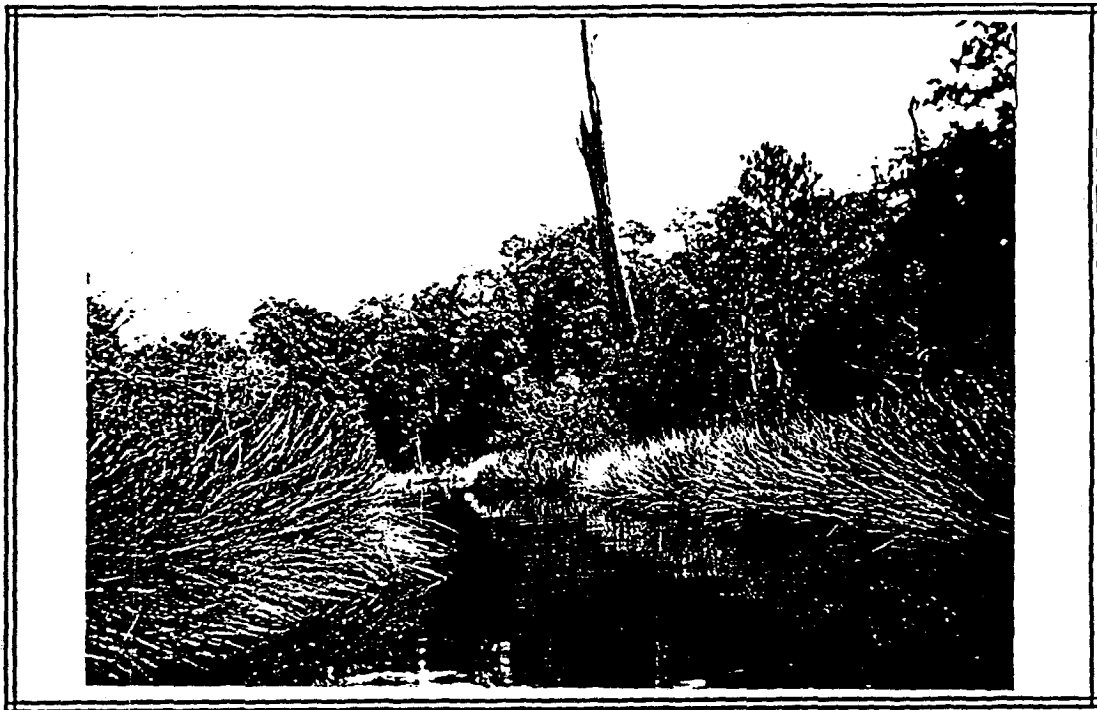
Water:

Temp. Surface: 23°C Dissolved Oxygen Surface: 6.5 mg/L pH Surface: 4.0 S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 75 Micromhos/cm Salinity Surface: 0.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny, approx. 80% Tide: In Out

Comments: NA = Not applicable; NE = Not Estimated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UT2-SW/SD Date: 8/20/92 Time: 16:35  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_



Site 69, Unnamed tributary, Station 2, Right Bank

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: 0.85 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: cloudy, raining, approx. 23°C Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 169-UT3-SW/SD Date: 8/20/92 Time: 16:00  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Core Spoon Other: \_\_\_\_\_



Site 169, Unnamed tributary, Station 3, Left Bank

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: NE  
 Estimated Stream Width: NE m Est. Stream Depth: 0.087 m Riffle: NE m Run: NE m Pool: NE m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA  
 Sediment Description: NE

Water:

Temp. Surface: NE C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.  
 Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.  
 Conductivity Surface: NE Micromhos/cm Salinity Surface: NE ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_  
 Weather Conditions: cloudy, windy, approx. 23°C Tide: In Out

Comments: Sediment resampled 9/14/92 @ 16:15, very silty;  
NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UTI-BN Date: 8/21/92 Time: 15:40  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-UTI-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: Deciduous trees

Estimated Stream Width: 1.8 m Est. Stream Depth: NE m Riffle: NE m Run: NE m Pool: 1.2 m

Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded  
 100% cover

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: None

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate #1: 4 Replicate #2: 3 Replicate #3: 2

Sediment Description: mostly sand w/ a few organics

Water:

Temp. Surface: 23.0 C Dissolved Oxygen Surface: 6.5 mg/L pH Surface: 4.0 S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: 75 Micromhos/cm Salinity Surface: 0.0 ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: None

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown

Weather Conditions: Sunny, Approx. 27°C Tide: In Out

Comments: NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UTA-BN Date: 8/19/92 Time: 12:08  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-UTA-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: Fringed Wetlands; horizons 1 and 3  
 Estimated Stream Width: 6.1 m Est. Stream Depth: 0.6 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: NA Channelized: Yes  No \_\_\_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 2 Replicate #2: 2 Replicate #3: 2  
 Sediment Description: 10% detritus, 90% silt, dark brown

Water:

Temp. Surface: 24.2 °C Dissolved Oxygen Surface: 4.5 mg/L pH Surface: 5.5 S.U.  
 Temp. Bottom: 24 °C Dissolved Oxygen Bottom: 4.5 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 172 Micromhos/cm Salinity Surface: 0.0 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 240 Micromhos/cm Salinity Bottom: 0.0 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny Approx. 36°C Tide: In Out

Comments: NA = Not Applicable; NE = Not Evaluated



SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UT3-BN Date: 8/19/92 Time: 13:10  
 Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water  
 SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Refer to 69-UT3-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_  
 Vegetation Type: Two horizons of grass, bushes, dead trees, pines, deciduous  
 Estimated Stream Width: 3 m Est. Stream Depth: 0.6 m Riffle: NA m Run: NA m Pool: NA m  
 Stream Type: Cold Water Warm Water Velocity: NE Channelized: Yes \_\_\_ No \_\_\_  
 Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_  
 Sediment Oils: Absent Slight Moderate Profuse HNu  
 Ponar Grab: Number of Jars Filled with Sediments Replicate #1: 4 Replicate #2: 3 Replicate #3: 4  
 Sediment Description: 10% sticks, 90% silt

Water:

Temp. Surface: 30.5 C Dissolved Oxygen Surface: 10.0 mg/L pH Surface: 8.3 S.U.  
 Temp. Bottom: 30.5 C Dissolved Oxygen Bottom: 10.3 mg/L pH Bottom: NE S.U.  
 Conductivity Surface: 15,200 Micromhos/cm Salinity Surface: 8.5 ppt Secchi Disc Surface: NE m  
 Conductivity Bottom: 15,200 Micromhos/cm Salinity Bottom: 8.5 ppt Secchi Disc Bottom: NE m  
 Water Odors: Normal Sewage Petroleum Chemical Other: None  
 Water Surface Oils: Slick Sheen None  
 Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Amber Brown  
 Weather Conditions: Sunny, few clouds, approx 30°C Tide: In Out  
 Comments: NA = Not Applicable; NE = Not Evaluated

SAMPLING STATION CHARACTERIZATION DATA SHEET

Station Number: 69-UT1-Fish Date: 9/12/92 Time: 10:20

Sample Type: (Fish) Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Electroshocker

Refer to 69-UT1-SW/SD

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Vegetation Type: \_\_\_\_\_

Estimated Stream Width: \_\_\_\_\_ m Est. Stream Depth: \_\_\_\_\_ m Riffle: \_\_\_\_\_ m Run: \_\_\_\_\_ m Pool: \_\_\_\_\_ m

Stream Type: Cold Water Warm Water Velocity: \_\_\_\_\_ Channelized: Yes \_\_\_ No \_\_\_

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: \_\_\_\_\_ Replicate #2: \_\_\_\_\_ Replicate #3: \_\_\_\_\_

Sediment Description: \_\_\_\_\_

Water:

Temp. Surface: 22.0° C Dissolved Oxygen Surface: NE mg/L pH Surface: NE S.U.

Temp. Bottom: NE C Dissolved Oxygen Bottom: NE mg/L pH Bottom: NE S.U.

Conductivity Surface: 60 Micromhos/cm Salinity Surface: 0.0 ppt Secchi Disc Surface: NE m

Conductivity Bottom: NE Micromhos/cm Salinity Bottom: NE ppt Secchi Disc Bottom: NE m

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: \_\_\_\_\_

Weather Conditions: Cool and Sunny Tide: In Out

Comments: NE = Not Evaluated

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HLO3-sw/SD Date: May 6, 94 (SW) Time: 1019 (SW)  
 Samplers: \_\_\_\_\_ Date: May 7, 94 (SD) Time: 0925 (SD)  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Core Spoon ...Other: Dis method

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: \_\_\_\_\_

Aquatic Vegetation: \_\_\_\_\_

Estimated Stream Width: 4 ft Est. Stream Depth: 17 ft Riffle: — ft Run: 1006 ft Pool: — ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: Yes — No X

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Slight Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu NA

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: Silty w/ much organic debris

Water:

July 6, 94 (1010)

Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
Surface	17.5	7.79	12	25,500	17

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: Sunny ~ 65°F Tide: In Out

Comments: \* Depth was 1 ft at sampling station - Depth or width was not measured due to the large size of the creek. Station was located in the White Oak River ~ 100' upstream from Hadnet Creek

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HC03-FS/BN Date: July 5, 94 (LNU) Time: 1450 (LNU)  
 Samplers: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon ...Other: \_\_\_\_\_

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: \_\_\_\_\_

Aquatic Vegetation: \_\_\_\_\_

Estimated Stream Width: \* ft Est. Stream Depth: 1\* ft Riffle: — ft Run: 1006 ft Pool: — ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: -Yes — No X

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu NA

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 1 Replicate #2: 1 Replicate #3: \_\_\_\_\_

Sediment Description: fine sand/silt, some organic debris

Water:

Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
<u>July 5, 94 (1450)</u> Surface	<u>17.8</u>	<u>7.69</u>	<u>Probe not working</u>	<u>26,500</u>	<u>17.9</u>

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: \_\_\_\_\_ Tide: In Out

Comments: \* Depth was 2ft at sampling station - Depth or width of the white oak river was not measured due to its large size. Station was located in the white oak river ~100' upstream from Hedges Creek

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HM02-SW/SD Date: May 6, 94 (SW) Time: 0920 (SW)  
 Samplers: \_\_\_\_\_ Date: May 7, 94 (SD) Time: 0845 (SD)  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Dip Method

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: \_\_\_\_\_

Aquatic Vegetation: \_\_\_\_\_

Estimated Stream Width: 50 ft Est. Stream Depth: 3-4 ft Riffle: — ft Run: 1018 ft Pool: — ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: Yes — No —

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNu NA

Ponar Grab: Number of Jars Filled with Sediments Replicate #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: Silty w/ much organic debris, brown

Water:

Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
<i>July 6, 94 (0920)</i> Surface	17.2	7.9	11.8	36,000	24
Bottom	17.6	7.6	11.6	38,000	25

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: \_\_\_\_\_ Tide: In Out

Comments: Station was at confluence of Holland mill Creek - Cantagos Brook

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HMOZ-FS/BU Date: May 4-8, 94 (FS) Time: \_\_\_\_\_  
 Samplers: \_\_\_\_\_ Date: May 5, 94 (BU) Time: 0930  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Hoop Nets

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: See Habitat Map

Aquatic Vegetation: NONE

Estimated Stream Width: 50 ft Est. Stream Depth: 3-4 ft Riffle: — ft Run: 1006 ft Pool: — ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: -Yes — No X

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HA

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: 5 Replicate #2: 5 Replicate #3: 4

Sediment Description: Mostly silt of trace sand, 7506 organic debris, some organisms noted

Water:

	Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
5-3-94 (1630)	Surface/Bottom	21/20	NA	7.75/7.75	29,000/27,000	21/19
5-4-94 (1032)	Surface/Bottom	19/19.5	NA	NA	3,810/6000	2/3.75
5-5-94 (0930)	Surface/Bottom	15.5/15.2	6.65/6.72	5.8/5.0	2490/2700	1/1.1

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: \_\_\_\_\_ Tide: In Out

Comments: Station was at confluence of Holland Mill Creek & Lantwood Brook

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HM03-SW/SD Date: May 6, 94 (SW) Time: 0920(SW)  
 Samplers: \_\_\_\_\_ Date: May 7, 94 (SD) Time: 0810(SD)  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: Dip Method

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: \_\_\_\_\_

Aquatic Vegetation: \_\_\_\_\_

Estimated Stream Width: \* ft Est. Stream Depth: 1 ft Riffle: - ft Run: 1000 ft Pool: - ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: Yes - No X

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HNd

Ponar Grab: Number of Jars Filled with Sediments Replicate: #1: NA Replicate #2: NA Replicate #3: NA

Sediment Description: Silty w/ some organic debris; brown

Water:

July 6, 94 (0920)

Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
Surface	17.8	6.81	3.4	19,000	13.5

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: \_\_\_\_\_ Tide: In Out

Comments: \* Depth was 2 ft at sampling station - Depth & width of water was not measured due to large size of sampling station was located in the White Oak River ~ 50' downstream from Holland Mill Creek

**SAMPLING STATION CHARACTERIZATION DATA SHEET**

Station Number: HM03-FS/BN Date: July 5, 94 (BN) Time: 1220 (BN)  
 Samplers: \_\_\_\_\_ Date: July 6-8, 94 (FS) Time: \_\_\_\_\_  
 Water Body: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_

Sample Type: Fish Benthic Macroinvertebrate Sediment Surface Water

SAMPLING EQUIPMENT: Seine Gill Net Ponar Kemmerer Sediment Corer Spoon Other: \_\_\_\_\_

Riparian Zone/Instream Features

Predominant Surrounding Land Use: Forest Urban Industrial Other: \_\_\_\_\_

Shore Vegetation: \_\_\_\_\_

Aquatic Vegetation: \_\_\_\_\_

Estimated Stream Width: \* ft Est. Stream Depth: 1\* ft Riffle: — ft Run: 100% ft Pool: — ft

Stream Type: Cold Water Warm Water Velocity: Tidal Channelized: -Yes — No X

Canopy Cover: Open Partly Open Partly Shaded Shaded

Sediment/Substrate:

Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic Other: \_\_\_\_\_

Sediment Oils: Absent Slight Moderate Profuse HN NA

Ponar Grab: Number of Jars Filled with Sediments Replicate #1: 1 Replicate #2: 1 Replicate #3: 2

Sediment Description: Very fine silt, shell fragments, <106 organic debris, some live clams / muscles were observed

Water:

Depth	Temp. °C	pH (s.u.)	Dissolved Oxygen (mg/L)	Conductivity (micromhos/cm)	Salinity (ppt)
<u>July 5, 94</u> Surface.	<u>17.5</u>	<u>7.90</u>	<u>10.8</u>	<u>32,000</u>	<u>22</u>

Water Odors: Normal Sewage Petroleum Chemical Other: \_\_\_\_\_

Water Surface Oils: Slick Sheen None Secchi: NA ft.

Turbidity: Clear Slightly Turbid Turbid Opaque Water Color: Brown

Weather Conditions: \_\_\_\_\_ Tide: In Out

Comments: \* Depth was 2ft at sampling station - depth of the white oak drain was not measured due to low size. Station was located in the white oak drain ~ 50' down stream from Holland Mill Creek



**APPENDIX T**  
**HABITAT SURVEY RESULTS**

---

ECOLOGICAL EVALUATION  
FIELD DATA SHEET - TERRESTRIAL

Project Name: MCB Camp Lejeune

Location: Jacksonville, NC

Date: 4/25/94

Sampling Location: Site 69, Area A69, Open Area within Fence

Data Collected By: L. Savage

Habitat Type: \_\_\_\_\_

Vegetation: generally sparse, small pines 4"-6" DBH (est.), scattered,  
Trees: with shrubs, limited vegetation on ground surface

Dominant Species:

- |  |           |
|--|-----------|
| 1. <u>Loblolly pine - <i>Pinus taeda</i></u> | 6. _____  |
| 2. _____                                     | 7. _____  |
| 3. _____                                     | 8. _____  |
| 4. _____                                     | 9. _____  |
| 5. _____                                     | 10. _____ |

Secondary Species:

- |                |           |
|----------------|-----------|
| 1. <u>none</u> | 6. _____  |
| 2. _____       | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

Saplings/Shrubs:

Dominant Species:

- |                                 |           |
|---------------------------------|-----------|
| 1. <u>none clearly dominant</u> | 6. _____  |
| 2. _____                        | 7. _____  |
| 3. _____                        | 8. _____  |
| 4. _____                        | 9. _____  |
| 5. _____                        | 10. _____ |

Secondary Species:

- |   |   |
|---|---|
| 1. <u>Sweetgum - Liquidambar</u>                              | 6. <u>Coastal Highbush Blueberry - Vaccinium corymbosum</u> |
| 2. <u>Holly - Ilex opaca</u>                                  | 7. <u>Late Low Blueberry - Vaccinium angustifolium</u>      |
| 3. <u>Water Oak - Quercus nigra</u>                           | 8. <u>Elliott Blueberry - Vaccinium elliotii</u>            |
| 4. <u>Wax Myrtle (Myrica cerifera)</u>                        | 9. _____  |
| 5. <u>Loblolly pine - Pinus taeda</u><br>(includes seedlings) | 10. _____   |

Woody Vines:

Dominant Species:

- |                |           |
|----------------|-----------|
| 1. <u>none</u> | 6. _____  |
| 2. _____       | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

Secondary Species:

- |                |           |
|----------------|-----------|
| 1. <u>none</u> | 6. _____  |
| 2. _____       | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

Herbs:

Dominant Species:

- 1. none clearly dominant - 6. \_\_\_\_\_
- 2. vegetation is sparse 7. \_\_\_\_\_
- 3. \_\_\_\_\_ 8. \_\_\_\_\_
- 4. \_\_\_\_\_ 9. \_\_\_\_\_
- 5. \_\_\_\_\_ 10. \_\_\_\_\_

Secondary Species:

- 1. mosses 6. \_\_\_\_\_
- 2. Lichens - Adcrest Lichen 7. \_\_\_\_\_
- 3. grasses 8. \_\_\_\_\_
- 4. broom sedge - Andropogon virginicus 9. \_\_\_\_\_
- 5. Round-leaved sundew 10. \_\_\_\_\_  
Drosera rotundifolia

Birds: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Sex</u>	<u>Feeding</u>	<u>Nesting</u>	<u>Approx. No.</u>
1.	_____	_____	_____	_____
2.	<u>Birds seen are included as total site list</u>			
3.	<u>under Area B69</u>			
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____

10. \_\_\_\_\_

Mammals: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.		<i>Odocoileus virginianus</i>		
2.		<i>deer tracks observed in open area</i>		
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Reptiles and Amphibians: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.				
2.		<i>none observed in open area</i>		
3.				
4.				
5.				
6.				

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

**Miscellaneous Notes:**

ECOLOGICAL EVALUATION  
FIELD DATA SHEET - TERRESTRIAL

Project Name: MCB Camp Lejeune

Location: Jacksonville, NC

Date: 4/25/94

Sampling Location: Site 69, Area 69B Woods ~~at~~ within Fence

Data Collected By: X. Savage

Habitat Type: Loblolly/Hardwood Forest

Vegetation: \_\_\_\_\_

Trees: trees clearly younger & smaller than those outside fenced area, 6-12" DBH (est.)

Dominant Species:

- |                                  |           |
|----------------------------------|-----------|
| 1. <u>trees well mixed,</u>      | 6. _____  |
| 2. <u>deciduous w. pine,</u>     | 7. _____  |
| 3. <u>mix of deciduous</u>       | 8. _____  |
| 4. <u>species - none clearly</u> | 9. _____  |
| 5. <u>dominant</u>               | 10. _____ |

Secondary Species:

- |  |   |
|--|---|
| 1. <u>Sweet gum - <sup>Liquidambar</sup> styraciflua</u> | 6. <u>tulip poplar - <sup>Liriodendron</sup> tulipifera</u> |
| 2. <u>Loblolly pine - <sup>Pinus</sup> taeda</u>         | 7. <u>beech - <sup>Fagus</sup> grandifolia</u>              |
| 3. <u>Water oak - <sup>Quercus</sup> nigra</u>           | 8. <u>black gum - <sup>Nyssa</sup> sylvatica</u>            |
| 4. <u>White oak - <sup>Q.</sup> alba</u>                 | 9. <u>Bitternut hickory - <sup>Carya</sup></u>              |
| 5. <u>red maple - <sup>Acer</sup> rubrum</u>             | 10. <u>Mockernut hickory - <sup>Carya</sup> tomentosa</u>   |
- Spanish oak - Q.  
Post oak - Q. stellata  
Sweet bay - \_\_\_\_\_

Saplings/Shrubs: saplings/seedlings of ~~dominant~~ trees present in addition to following species

Dominant Species:

- |                                 |           |
|---------------------------------|-----------|
| 1. <u>none clearly dominant</u> | 6. _____  |
| 2. _____                        | 7. _____  |
| 3. _____                        | 8. _____  |
| 4. _____                        | 9. _____  |
| 5. _____                        | 10. _____ |

Secondary Species:

- |  |  |
|--|--|
| 1. <u>winged sumac - Rhus copallina</u>                | 6. <u>sourwood -</u>                   |
| 2. <u>sassafras -</u>                                  | 7. <u>red buckeye - Aesculus pavia</u> |
| 3. <u>chestnut - <sup>Castanea</sup> dentata</u>       | 8. _____                               |
| 4. <u>common wax myrtle <sup>Myrica</sup> cerifera</u> | 9. _____                               |
| 5. <u>dogwood - Cornus Florida</u>                     | 10. _____                              |

Woody Vines:

Dominant Species:

- |                                 |           |
|---------------------------------|-----------|
| 1. <u>none clearly dominant</u> | 6. _____  |
| 2. _____                        | 7. _____  |
| 3. _____                        | 8. _____  |
| 4. _____                        | 9. _____  |
| 5. _____                        | 10. _____ |

Secondary Species:

- |   |           |
|---|-----------|
| 1. <u>sand grape - Vitis rupestris</u>                | 6. _____  |
| 2. <u>common greenbriar <sup>Smilax</sup> rotundi</u> | 7. _____  |
| 3. <u>poison ivy - Rhus radicans</u>                  | 8. _____  |
| 4. <u>bell briar - <sup>Bona-</sup> Smilax nox</u>    | 9. _____  |
| 5. _____  | 10. _____ |



Herbs:

Dominant Species:

- 1. none dominant -
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_

Secondary Species:

- 1. Partridgeberry - *Mitchella repens*
- 2. Beach Fern -
- 3. Cinnamon Fern - *Osmunda cinnamomea*
- 4. Prickly Fern - *Pteris aquilina*
- 5. Royal Fern -
- 6. Sensitive Fern - *Onoclea sensibilis*
- 7. Blue-eyed grass -
- 8. Common Blue Violet - *Viola* sp.
- 9. Virginia Chain fern -
- 10. Marsh fern - *Aspidium Thelypteris*

Birds: \_\_\_\_\_

Time: 9:30 Am - 17:15 - Note: This list includes all birds observed at Site 69

Weather Conditions: clear, 70° - 85°, breezy

<u>Species</u>	<u>Sex</u>	<u>Feeding</u>	<u>Nesting</u>	<u>Approx. No.</u>
1. <u>Carolina wren</u>				
2. <u>Red-eyed Vireo</u>				
3. <u>Turkey Vulture</u>				
4. <u>Blue-grey Gnatcatcher</u>				
5. <u>Yellow Warbler</u>				
6. <u>Brown-headed Nuthatch - <i>Sitta</i></u>				
7. <u>Fish Crow - <i>Corvus</i></u>				
8. <u>Mourning Dove - <i>Zenaida macroura</i></u>				
9. <u>Wood Pewee -</u>				

10. Summer Tanager (pair) (more on reverse)

Mammals: \_\_\_\_\_

Time: see above

Weather Conditions: see above

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
----------------	-----------------	-------------	-----------------------	------------

1. Deer - tracks, trails, observed Odocoileus virginianus

2. mole - tunnels observed

3. ~~Raccoon tracks observed~~

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

Reptiles and Amphibians: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
----------------	-----------------	-------------	-----------------------	------------

1. Black Racer - Coluber may have been resting in

2. Constrictor constrictor dead tree

3. Anole - Anolis carolinensis

4. Five-lined Skink - Eumeces fasciatus

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

**Miscellaneous Notes:**

A small (20' x 20') wetland area is present near SB19. Sphagnum moss growing in the seep was not found anywhere else on the site and was not noted in other wetlands in the site area. Also present at this seep were royal fern, cinnamon fern, and sensitive fern.

ECOLOGICAL EVALUATION  
FIELD DATA SHEET - TERRESTRIAL

Project Name: MCB Camp Lejeune

Location: Jacksonville, NC

Date: 4/25/94

Sampling Location: Site 69, Area 69C, Cleared area along fence

Data Collected By: Z. Savage

Habitat Type: \_\_\_\_\_

Vegetation: Ecotone between field and forest, generally field plants with shrubs, saplings, vines, and seedling trees

Trees:

Dominant Species:

- |                |           |
|----------------|-----------|
| 1. <u>none</u> | 6. _____  |
| 2. _____       | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

Secondary Species:

- |                |           |
|----------------|-----------|
| 1. <u>none</u> | 6. _____  |
| 2. _____       | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

Saplings/Shrubs:

Dominant Species:

- |                         |           |
|-------------------------|-----------|
| 1. <u>none dominant</u> | 6. _____  |
| 2. _____                | 7. _____  |
| 3. _____                | 8. _____  |
| 4. _____                | 9. _____  |
| 5. _____                | 10. _____ |

Secondary Species:

- |   |           |
|---|-----------|
| 1. <u>Loblolly - Pinus taeda</u>                      | 6. _____  |
| 2. <u>Sweetgum <sup>Liquidambar</sup> styraciflua</u> | 7. _____  |
| 3. <u>winged sumac - <sup>Rhus</sup> copallina</u>    | 8. _____  |
| 4. <u>Water oak - <sup>nigra</sup> Quercus</u>        | 9. _____  |
| 5. <u>Common <sup>caribaea</sup> myrtle - Myrica</u>  | 10. _____ |

Woody Vines:

Dominant Species:

- |                         |           |
|-------------------------|-----------|
| 1. <u>none dominant</u> | 6. _____  |
| 2. _____                | 7. _____  |
| 3. _____                | 8. _____  |
| 4. _____                | 9. _____  |
| 5. _____                | 10. _____ |

Secondary Species:

- |  |           |
|--|-----------|
| 1. <u>Sand Grape - Vitis rupestris</u> | 6. _____  |
| 2. <u>Blackberry - Rubus sp.</u>       | 7. _____  |
| 3. _____                               | 8. _____  |
| 4. _____                               | 9. _____  |
| 5. _____                               | 10. _____ |



10. \_\_\_\_\_

Mammals: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.	white-tailed deer -	Odocoileus	virginiana	tracks observed
2.	raccoon -	Procyon	lotor	" "
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Reptiles and Amphibians: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.	none observed			
2.				
3.				
4.				
5.				
6.				

- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_

**Miscellaneous Notes:**



ECOLOGICAL EVALUATION  
FIELD DATA SHEET - TERRESTRIAL

Project Name: MCB Camp Lejeune

Location: Jacksonville, NC

Date: 4/25/94

Sampling Location: Site 69, Area 69D, Forest surrounding Fenced Area

Data Collected By: Z. Savage

Habitat Type: \_\_\_\_\_

Vegetation: generally older forest, trees 6-18" DBH (est.), less  
undergrowth than forest inside fence, undergrowth almost  
Trees: non-existent in some areas of forest floor

Dominant Species:

- |                                |           |
|--------------------------------|-----------|
| 1. <u>tree species well</u>    | 6. _____  |
| 2. <u>mixed - none clearly</u> | 7. _____  |
| 3. <u>dominant</u>             | 8. _____  |
| 4. _____                       | 9. _____  |
| 5. _____                       | 10. _____ |

Secondary Species:

- |                         |                             |
|-------------------------|-----------------------------|
| 1. <u>water oak</u>     | 6. <u>sweetgum</u>          |
| 2. <u>white oak</u>     | 7. <u>red oak</u>           |
| 3. <u>loblolly pine</u> | 8. <u>mockernut hickory</u> |
| 4. <u>beech</u>         | 9. <u>bitternut hickory</u> |
| 5. <u>tulip</u>         | 10. <u>red maple</u>        |

Saplings/Shrubs:

Dominant Species:

- |                                 |           |
|---------------------------------|-----------|
| 1. <u>understory tree/shrub</u> | 6. _____  |
| 2. <u>layer well mixed -</u>    | 7. _____  |
| 3. <u>no species clearly</u>    | 8. _____  |
| 4. <u>dominant</u>              | 9. _____  |
| 5. _____                        | 10. _____ |

Secondary Species:

- |  |  |
|--|--|
| 1. <u>Holly -</u>  | 6. <u>Dwarf Pawpaw - <i>Asimina parviflora</i></u> |
| 2. <u>Flowering dogwood -</u><br><u>wax myrtle</u>         | 7. _____   |
| 3. <u><del>sweet gum</del></u>                             | 8. <u>Saplings of tree species</u>                 |
| 4. <u>Red Buckeye</u>                                      | 9. _____   |
| 5. <u>Umbrella magnolia -</u><br><u>magnolia tripetala</u> | 10. _____  |

Woody Vines:

Dominant Species:

- |                                    |           |
|------------------------------------|-----------|
| 1. <u>Common - none clearly</u>    | 6. _____  |
| 2. <u>dominant - not generally</u> | 7. _____  |
| 3. <u>present except in</u>        | 8. _____  |
| 4. <u>open areas of forest</u>     | 9. _____  |
| 5. _____                           | 10. _____ |

Secondary Species:

- |                               |           |
|-------------------------------|-----------|
| 1. <u>Common Greenbrier -</u> | 6. _____  |
| 2. <u>Poison Ivy</u>          | 7. _____  |
| 3. _____                      | 8. _____  |
| 4. _____                      | 9. _____  |
| 5. _____                      | 10. _____ |

Herbs:

Dominant Species:

- 1. no species clearly 6. \_\_\_\_\_
- 2. dominant 7. \_\_\_\_\_
- 3. \_\_\_\_\_ 8. \_\_\_\_\_
- 4. \_\_\_\_\_ 9. \_\_\_\_\_
- 5. \_\_\_\_\_ 10. \_\_\_\_\_

Secondary Species:

- 1. Christmas fern - 6. \_\_\_\_\_
- 2. Partridge berry - 7. \_\_\_\_\_
- 3. wild Ginger - 8. \_\_\_\_\_
- 4. spotted wintergreen - China - 9. \_\_\_\_\_  
phila maculata
- 5. \_\_\_\_\_ 10. \_\_\_\_\_

Birds: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Sex</u>	<u>Feeding</u>	<u>Nesting</u>	<u>Approx. No.</u>
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	<u>bird species noted are listed with</u>			
4.	<u>information for site 69B</u>			
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____

10. \_\_\_\_\_

Mammals: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.	white tailed deer -		tracks observed	
2.	Squirrel		feeding area observed	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Reptiles and Amphibians: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
1.				
2.		none observed		
3.				
4.				
5.				
6.				

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

**Miscellaneous Notes:**

ECOLOGICAL EVALUATION  
FIELD DATA SHEET - TERRESTRIAL

Project Name: MCB Camp Lejeune

Location: Jacksonville, NC

Date: 4/25/94

Sampling Location: Site 69, Area 69E, Forested wetlands in Forest around Site 69

Data Collected By: J. Savage

Habitat Type: \_\_\_\_\_

Vegetation: wetland areas are forested, trees exhibit buttressed trunks, wetland veg. present

Trees:

Dominant Species:

- |                              |           |
|------------------------------|-----------|
| 1. <u>no species clearly</u> | 6. _____  |
| 2. <u>dominant</u>           | 7. _____  |
| 3. _____                     | 8. _____  |
| 4. _____                     | 9. _____  |
| 5. _____                     | 10. _____ |

Secondary Species:

- |                    |           |
|--------------------|-----------|
| 1. <u>Sweetgum</u> | 6. _____  |
| 2. <u>Beech</u>    | 7. _____  |
| 3. <u>Ash</u>      | 8. _____  |
| 4. <u>Tulip</u>    | 9. _____  |
| 5. _____           | 10. _____ |

**Saplings/Shrubs:**

**Dominant Species:**

- |                              |           |
|------------------------------|-----------|
| 1. _____                     | 6. _____  |
| 2. <u>no shrubs were</u>     | 7. _____  |
| 3. <u>present in wetland</u> | 8. _____  |
| 4. <u>areas</u>              | 9. _____  |
| 5. _____                     | 10. _____ |

**Secondary Species:**

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

**Woody Vines:**

**Dominant Species:**

- |                |           |
|----------------|-----------|
| 1. _____       | 6. _____  |
| 2. <u>none</u> | 7. _____  |
| 3. _____       | 8. _____  |
| 4. _____       | 9. _____  |
| 5. _____       | 10. _____ |

**Secondary Species:**

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

Herbs:

Dominant Species:

- |                         |           |
|-------------------------|-----------|
| 1. <u>Lizards tail-</u> | 6. _____  |
| 2. _____                | 7. _____  |
| 3. _____                | 8. _____  |
| 4. _____                | 9. _____  |
| 5. _____                | 10. _____ |

Secondary Species:

- |                              |           |
|------------------------------|-----------|
| 1. <u>Jack-in-the-Pulpit</u> | 6. _____  |
| 2. <u>Water Pennywort</u>    | 7. _____  |
| 3. <u>Conc</u>               | 8. _____  |
| 4. _____                     | 9. _____  |
| 5. _____                     | 10. _____ |

Birds: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Sex</u>	<u>Feeding</u>	<u>Nesting</u>	<u>Approx. No.</u>
1.	_____	_____	_____	_____
2.	Birds observed are listed with			
3.	information for Site 69B			
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____



10. \_\_\_\_\_

Mammals: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
----------------	-----------------	-------------	-----------------------	------------

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. *none observed*

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

Reptiles and Amphibians: \_\_\_\_\_

Time: \_\_\_\_\_

Weather Conditions:

<u>Species</u>	<u>Observed</u>	<u>Sign</u>	<u>Adult/Juvenile</u>	<u>Sex</u>
----------------	-----------------	-------------	-----------------------	------------

1. \_\_\_\_\_

2. \_\_\_\_\_

3. *none observed*

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7.

---

8.

---

9.

---

10.

---

**Miscellaneous Notes:**

**APPENDIX U**  
**THREATENED AND/OR ENDANGERED SPECIES LIST**

Critical species list - Camp Lejeune endangered species and special-interest communities survey

Principal investigator: Richard LeBlond, 326-1440.

List current as of 9-30-91.

Replaces list of 6-30-91.

"?" = Species names followed by a "?" are less than confidently identified. They are nonetheless caught in this biological safety net, the mesh size of which errs on the side of diversity. Until identification is confirmed (most of these are represented by a specimen), these site records should be regarded as tentative.

Species sites are listed chronologically under the species name; with the 1990 month and day of discovery listed first, followed by the site's sector site number, community type and UTM grid number. Sites documented prior to the start of the current survey are indicated by the parenthetical date of discovery following the site name (see Rhexia aristosa at FD-1). Prior sites not yet relocated during the current survey are indicated by "---" in the date column (see Rhynchospora tracyi at FD-1).

Status codes. Federal status is listed first, and separated from the state status by a comma; e.g., Rhexia aristosa FC2,T (Federal Candidate level 2, state Threatened). Species with state status only are indicated by a single code without comma; e.g., Rhynchospora tracyi SR (Significantly Rare).

FE = Federal Endangered

FT = Federal Threatened

FC1 = Federal Candidate level 1. At risk. Listing warranted but precluded by higher priorities.

FC2 = Federal Candidate level 2. Vulnerable. Listing warranted but precluded by higher priorities.

FC3 = Federal Candidate level 3C. More abundant and/or less threatened than previously known.

E = State Endangered

T = State Threatened

SC = State Special Concern

C = State Candidate

SR = State Significantly Rare

W = State Watch List (W1)

W3 = " " " , undocumented state occurrence prior to Lejeune site.

proposed = proposed for listing as State Candidate, Significantly Rare or Watch List based on current evidence

List of species and communities by sector - Camp Lejeune  
endangered species and special-interest communities survey

List current as of 9-30-91.  
 Replaces list of 6-30-91.

		<u>Status</u>	<u>UTM Grid</u>
<b><u>SECTOR E</u></b>			
E-1	Upper Beach Amaranthus pumilus (1988)	FC2,T	907266- 949297
E-5	Brackish Marsh Parietaria praetermissa Solanum pseudogracile	W W	860237
<b><u>SECTOR F</u></b>			
FA-1	Depression Meadow Aristida palustris Burmannia biflora Panicum tenerum Rhexia aristosa Rhynchospora wrightiana	SR W SR FC2,T W	878409
FA-2	Road Meadow Rhynchospora nitens Rhynchospora pusilla	W W	895385
FA-4	Depression Meadow Aristida palustris Coelorachis rugosa Dichantherium erectifolium Rhexia aristosa Rhynchospora harperi	SR W SR FC2,T C	883407
FB-1	Wet Pine Flatwoods Amphicarpum purshii Lysimachia loomisii Panicum tenerum Xyris difformis var. curtissii	SR W SR W	927413
FB-2	Road Meadow Rhynchospora pusilla Rhynchospora nitens	W W	926409
FB-3	Wet Pine Flatwoods Lysimachia loomisii Pleea tenuifolia Scleria minor Tofieldia glabra	W W SR FC2,C	937416

(FB-3 cont.)		
	<i>Xyris difformis</i> var. <i>curtissii</i>	W
	<i>Xyris elliottii</i>	SR
FB-4	Wet Pine Flatwoods	939426
	<i>Lysimachia loomisii</i>	W
	<i>Rhynchospora harveyi</i>	W
	<i>Rhynchospora pusilla</i>	W
	<i>Scleria minor</i>	SR
FC-2	Flatwood/Swamp Ecotone	922413
	<i>Anthaenania rufa</i>	W
	<i>Helianthus heterophyllus</i>	W
	<i>Lysimachia loomisii</i>	W
	<i>Oxypolis ternata</i>	FC2,T
FC-3	Depression Meadow	918318
	<i>Aristida palustris</i>	SR
	<i>Bartonia verna</i>	W
	<i>Burmannia biflora</i>	W
	<i>Dichantherium erectifolium</i>	SR
	<i>Litsea aestivalis</i>	FC2,C
	<i>Muhlenbergia torreyana</i>	F3C,E
	<i>Paspalum praecox</i>	W
	<i>Rhexia aristosa</i>	FC2,T
	<i>Rhynchospora cephalantha</i> f. <i>antrorsa</i>	unusual/rare
	<i>Rhynchospora tracyi</i>	SR
FC-4	Pocosin Ecotone	919376
	<i>Andropogon capillipes</i>	W
	<i>Gentiana autumnalis</i>	W
FD-1	Cypress Savanna	904377
	<i>Agalinis linifolia</i>	SR
	<i>Anthaenania rufa</i>	W
	<i>Aristida palustris</i>	SR
	<i>Bartonia verna</i>	W
	<i>Burmannia biflora</i>	W
	<i>Carex verrucosa</i>	SR
	<i>Coelorachis rugosa</i>	W
	<i>Dichantherium</i> sp. 1 = <i>Panicum hirstii</i>	FC2,C
	<i>Dichantherium erectifolium</i>	SR
	<i>Lobelia boykinii</i>	FC2,C
	<i>Lysimachia loomisii</i>	W
	<i>Muhlenbergia torreyana</i>	F3C,E
	<i>Panicum tenerum</i>	SR
	<i>Paspalum praecox</i>	W
	<i>Rhexia aristosa</i>	FC2,T
	<i>Rhynchospora cephalantha</i> f. <i>antrorsa</i>	unusual/rare
	<i>Rhynchospora harperi</i>	C
	<i>Rhynchospora tracyi</i> (1984)	SR
	<i>Rhynchospora wrightiana</i>	W
	<i>Scleria georgiana</i>	C
	<i>Spiranthes laciniata</i>	C

(FD-1 cont.)

Xyris baldwiniana	W	
<b>FD-3 Small Depression Pond</b>		<b>899378</b>
Carex verrucosa	SR	
Eleocharis equisetoides	SR	

SECTOR G

<b>G-10 Pocosin Ecotone</b>		<b>929348</b>
Lysimachia asperulifolia	FE,E	

<b>GA-1 Depression Meadow, Wet Pine Flatwoods</b>		<b>894359</b>
Agalinis linifolia	SR	
Andropogon capillipes	W	
Aristida palustris	SR	
Burmannia biflora	W	
Dichanthelium erectifolium	SR	
Eleocharis equisetoides	SR	
Eleocharis melanocarpa	C	
Gentiana autumnalis	W	
Panicum tenerum	SR	
Rhexia aristosa	FC2,T	
Rhynchospora tracyi	SR	
Scleria georgiana	C	

<b>GA-2 Depression Meadow</b>		<b>896360</b>
Andropogon capillipes	W	
Agalinis linifolia	SR	
Aristida palustris	SR	
Burmannia biflora	W	
Dichanthelium erectifolium	SR	
Panicum tenerum	SR	
Pleea tenuifolia	W	
Rhexia aristosa	FC2,T	
Rhynchospora wrightiana	W	
Scleria georgiana	C	

<b>GA-3 Cypress Savanna</b>		<b>898360</b>
Agalinis linifolia	SR	
Andropogon capillipes	W	
Aristida palustris	SR	
Burmannia biflora	W	
Carex verrucosa	SR	
Coelorachis rugosa	W	
Dichanthelium erectifolium	SR	
Eleocharis equisetoides	SR	
Panicum tenerum	SR	
Paspalum praecox	W	
Rhexia aristosa	FC2,T	
Rhynchospora pusilla	W	
Rhynchospora tracyi	SR	
Scleria georgiana	C	

GA-4	Savanna		899349
	<i>Asclepias pedicellata</i>	C	
	<i>Dichanthelium erectifolium</i>	SR	
	<i>Dionaea muscipula</i>	FC2, C-SC	
	<i>Lysimachia loomisii</i>	W	
	<i>Oxypolis ternata</i>	FC2, C	
	<i>Pleea tenuifolia</i>	W	
	<i>Polygala brevifolia</i>	W	
	<i>Polygala hookeri</i>	C	
	<i>Rhynchospora pallida</i>	SR	
	<i>Sarracenia rubra</i> ssp. <i>rubra</i>	W	
	<i>Solidago pulchra</i>	FC2, C	
	<i>Tofieldia glabra</i>	FC2, C	
	<i>Xyris baldwiniana</i>	W	
GA-5	Depression Meadow		901361
	<i>Agalinis linifolia</i>	SR	
	<i>Anthaenantia rufa</i>	W	
	<i>Aristida palustris</i>	SR	
	<i>Burmannia biflora</i>	W	
	<i>Carex verrucosa</i>	SR	
	<i>Dichanthelium erectifolium</i>	SR	
	<i>Eleocharis equisetoides</i>	SR	
	<i>Panicum tenerum</i>	SR	
	<i>Paspalum praecox</i>	W	
	<i>Rhexia aristosa</i>	FC2, T	
	<i>Rhynchospora inundata</i>	W	
	<i>Rhynchospora tracyi</i>	SR	
	<i>Xyris smalliana</i>	W	
GB-1	Wet Pine Flatwoods/Small Stream Pocosin		908376
	<i>Rhynchospora elliottii</i>	W	
GB-2	Road Meadow		907376
	<i>Agalinis virgata</i>	C	
GB-3	Road Meadow		929368
	<i>Calopogon barbatus</i>	W	
	<i>Dionaea muscipula</i>	FC2, C-SC	
	<i>Solidago pulchra</i>	FC2, C	
GB-4	Road Meadow		931365
	<i>Dionaea muscipula</i>	FC2, C-SC	
	<i>Rhynchospora pallida</i>	SR	
	<i>Solidago pulchra</i>	FC2, C	
GB-5	Wet Pine Flatwoods		932364
	<i>Dionaea muscipula</i>	FC2, C-SC	
	<i>Solidago pulchra</i>	FC2, C	
	<i>Tofieldia glabra</i>	FC2, C	



GB-6	Pocosin Ecotone		935364
	<i>Amphicarpum purshii</i>	SR	
	<i>Dionaea muscipula</i>	FC2, C-SC	
	<i>Solidago pulchra</i>	FC2, C	
GB-7	Road Meadow		940364
	<i>Rhexia aristosa</i>	FC2, T	
	<i>Solidago pulchra</i>	FC2, C	
GB-8	Road Meadow		932368
	<i>Bartonia verna</i>	W	
	<i>Solidago pulchra</i>	FC2, C	
	<i>Tofieldia glabra</i>	FC2, C	
GB-9	Road Meadow		934362
	<i>Juncus validus</i>	W	
GB-10	Road Depression Meadow		918374
	<i>Calopogon barbatus</i>	W	
GC-1	Small Depression Pond		946360
	<i>Agalinis linifolia</i>	SR	
	<i>Aristida palustris</i>	SR	
	<i>Coelorachis rugosa</i>	W	
	<i>Dichanthelium erectifolium</i>	SR	
	<i>Eleocharis tricostata</i>	W	
	<i>Panicum tenerum</i>	SR	
	<i>Paspalum praecox</i>	W	
	<i>Rhexia aristosa</i>	FC2, T	
	<i>Rhynchospora tracyi</i>	SR	
GC-2	Small Depression Pond		949357
	<i>Agalinis linifolia</i>	SR	
	<i>Aristida palustris</i>	SR	
	<i>Burmannia biflora</i>	W	
	<i>Cladium mariscoides</i>	SR	
	<i>Dichanthelium erectifolium</i>	SR	
	<i>Eleocharis equisetoides</i>	SR	
	<i>Ludwigia linifolia</i>	SR	
	<i>Panicum tenerum</i>	SR	
	<i>Paspalum praecox</i>	W	
	<i>Rhexia aristosa</i>	FC2, T	
	<i>Rhynchospora harperi</i>	C	
	<i>Rhynchospora pusilla</i>	W	
	<i>Rhynchospora tracyi</i>	SR	
	<i>Scleria georgiana</i>	C	
GC-3	Pocosin Ecotone		945342
	<i>Amphicarpum purshii</i>	SR	
GC-5	Depression Meadow		940345
	<i>Eleocharis tricostata</i>	W	
	<i>Panicum tenerum</i>	SR	

GC-6.	Depression Meadow		942358
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Burmannia biflora	W	
	Coelorachis rugosa	W	
	Dichanthelium erectifolium	SR	
	Litsea aestivalis	FC2,C	
	Panicum tenerum	SR	
	Paspalum praecox	W	
	Rhexia aristosa	FC2,T	
	Rhynchospora wrightiana	W	
	Scleria georgiana	C	
GC-7	Depression Meadow		942359
	Aristida palustris	SR	
	Litsea aestivalis	FC2,C	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhexia cubensis	SR	
	Sarracenia rubra ssp. rubra	W	
GC-8	Small Depression Pond		947356
	Rhexia aristosa	FC2,T	
	Rhexia aristosa X cubensis	undescribed taxon	
	Rhexia cubensis	SR	
GC-9	Depression Meadow		949356
	Aristida palustris	SR	
	Coelorachis rugosa	W	
	Rhexia aristosa	FC2,T	
GC-10	Depression Meadow		948356
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Coelorachis rugosa	W	
	Eleocharis tricostata	W	
	Panicum tenerum	SR	
	Paspalum praecox	W	
	Rhexia aristosa	FC2,T	
	Rhynchospora tracyi	SR	
	Scleria georgiana	C	
GC-11	Flatwoods Road Meadow		949364
	Andropogon capillipes	W	
GC-12	Streamhead Pocosin		944348
	Amphicarpum purshii	SR	
	Dionaea muscipula	FC2,C-SC	
	Peltandra sagittifolia	SR	
	Rhynchospora pallida	SR	
	Solidago pulchra	FC2,C	
	Tofieldia glabra	FC2,C	

GD-1.	Road Meadow		938326
	<i>Amphicarpum purshii</i>	SR	
	<i>Rhexia cubensis</i>	SR	
GD-2	Small Depression Pond		938335
	<i>Eleocharis tricostata</i>	W	
GD-3	Small Depression Pond		937335
	<i>Eleocharis vivipara</i>	W	
	<i>Litsea aestivalis</i>	FC2,C	
	<i>Rhexia aristosa</i>	FC2,T	
	<i>Xyris smalliana</i>	W	
GD-4	Small Depression Pond		936336
	<i>Dichanthelium erectifolium</i>	SR	
	<i>Eleocharis melanocarpa</i>	C	
	<i>Eleocharis tricostata</i>	W	
	<i>Rhexia aristosa</i>	FC2,T	
GD-5	Road Meadow		921333
	<i>Agalinis linifolia</i>	SR	
	<i>Dionaea muscipula</i>	FC2,C-SC	
	<i>Pleea tenuifolia</i>	W	
	<i>Rhynchospora pusilla</i>	W	
	<i>Solidago pulchra</i>	FC2,C	
GD-6	Road Meadow		922332
	<i>Rhexia aristosa</i>	FC2,T	
	<i>Rhexia aristosa</i> X <i>cubensis</i>	undescribed taxon	
	<i>Rhexia cubensis</i>	SR	
	<i>Rhynchospora pusilla</i>	W	
	<i>Xyris baldwiniana</i>	W	
GE-1	Flatwoods/Pocosin Ecotone		910328
	<i>Calamovilfa brevipilis</i>	F3C,E	
	<i>Carex elliotii</i>	W	
	<i>Dionaea muscipula</i> (1988)	FC2,C-SC	
	<i>Ludwigia microcarpa</i> (1988)	W	
	<i>Lysimachia asperulifolia</i> (1988)	FE,E	
	<i>Polygala brevifolia</i>	W	
	<i>Rhynchospora pallida</i>	SR	
	<i>Solidago pulchra</i> (1988)	FC2,C	
	<i>Tofieldia glabra</i>	FC2,C	
GE-2	Pocosin Ecotone		918333
	<i>Amphicarpum purshii</i>	SR	
	<i>Dionaea muscipula</i>	FC2,C-SC	
	<i>Oxypolis ternata</i>	FC2,C	
	<i>Pleea tenuifolia</i>	W	
	<i>Polygala brevifolia</i>	W	
	<i>Rhynchospora pallida</i>	SR	
	<i>Rhynchospora wrightiana</i>	W	
	<i>Solidago pulchra</i>	FC2,C	
	<i>Tofieldia glabra</i>	FC2,C	

GE-3	Road Depression Meadow Amphicarpum purshii Calamovilfa brevipilis Dionaea muscipula Pleea tenuifolia	SR F3C,E FC2,C-SC W	907330
GE-4	Small Depression Pond Rhexia aristosa Rhynchospora inundata	FC2,T W	907328
GF-1	Wet Pine Flatwoods Agaliniis fasciculata Agaliniis virgata Calopogon barbatus Gentiana autumnalis Tofieldia glabra	W C W W FC2,C <sub>4</sub>	949331
GF-1	Road Meadow Andropogon capillipes	W	949331
GF-3	Depression Meadow Rhexia aristosa	FC2,T	906327
GF-5	Road Meadow Agaliniis linifolia Ludwigia microcarpa Rhexia aristosa Xyris baldwiniana	SR W FC2,T W	944326
GG-1	Depression Meadow Dichanthelium erectifolium Eleocharis equisetoides Panicum tenerum Rhexia aristosa Rhexia cubensis Rhynchospora inundata Rhynchospora tracyi Rhynchospora wrightiana	SR SR SR FC2,T SR W SR W	934317
GG-2	Road Meadow Eleocharis tricostata Ludwigia microcarpa	W W	943325
GH-1	Coastal Fringe Sandhill Cladina evansii	W	?
GI-1	Coastal Fringe Sandhill Cladina evansii	W	?

SECTOR H

HA-3	Depression Meadow	876335
	Aristida palustris	SR
	Burmannis biflora	W
	Coelorachis rugosa	W
	Dichanthelium erectifolium	SR
	Ludwigia linifolia	SR
	Rhexia aristosa	FC2, T
	Rhynchospora harperi	C
	Rhynchospora nitens	W
	Rhynchospora wrightiana	W
	Scleria georgiana	C
HA-5	Depression Meadow	874336
	Aristida palustris	SR
	Dichanthelium erectifolium	SR
	Ludwigia linifolia	SR
	Rhexia aristosa	FC2, T
	Scleria georgiana	C
HA-6	Small Depression Pond	873334
	Aristida palustris	SR
	Coelorachis rugosa	W
	Dichanthelium erectifolium	SR
	Eleocharis tricostata	W
	Rhexia aristosa	FC2, T
	Rhynchospora harperi	C
	Rhynchospora nitens	W
	Scleria reticularis var. reticularis	C
HA-7	Small Depression Pond	872334
	Dichanthelium erectifolium	SR
	Ludwigia linifolia	SR
	Rhexia aristosa	FC2, T
	Rhynchospora nitens	W
	Scleria reticularis var. reticularis	C
HA-8	Small Depression Pond	872333
	Coelorachis rugosa	W
	Rhynchospora nitens	W
	Scleria reticularis var. reticularis	C
HA-9	Road Meadow (best treated as extension of HA-10)	871336
	Scleria georgiana	C
HA-10	Small Depression Pond	870337
	Scleria georgiana	C
HA-11	Small Depression Pond	869338
	Ludwigia linifolia	SR
	Rhexia aristosa	FC2, T
	Rhynchospora nitens	W
	Scleria reticularis var. reticularis	C

HB-1	Flatwoods/Pocosin Ecotone		876311
	Carex elliottii	W	
	Dionaea muscipula	FC2,C-SC	
	Polygala brevifolia	W	
HB-2	Flatwoods/Pocosin Ecotone		875317
	Amphicarpum purshii	SR	
	Lysimachia asperulifolia (P. Robinson)	FE,E	
	Polygala brevifolia	W	
	Solidago pulchra	FC2,C	
HB-3	Small Depression Pond		878328
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Burmannia biflora	W	
	Dichanthelium erectifolium	SR	
	Dionaea muscipula	FC2,C-SC	
	Ludwigia linifolia	SR	
	Oxypolis ternata	FC2,C	
	Paspalum praecox	W	
	Rhexia aristosa	FC2,T	
	Rhynchospora harperi	C	
	Solidago pulchra	FC2,C	
HB-5	Wet Pine Flatwoods, Pocosin		870320
	Asclepias pedicellata	C	
	Calopogon barbatus	W	
	Solidago pulchra	FC2,C	
	Sporopolus species 1	FC2,T	
HD-1	Small Depression Pond/Black Gum Swamp		878337
	Dichanthelium erectifolium	SR	
	Rhexia aristosa	FC2,T	
HD-2	Depression Meadow/Small Depression Pond		876339
	Aristida palustris	SR	
	Burmannia biflora	W	
	Rhexia aristosa	FC2,T	
HD-3	Depression Meadow/Small Depression Pond		871341
	Aristida palustris	SR	
	Burmannia biflora	W	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Eleocharis robbinsii	C	
	Myriophyllum laxum	FC2,T	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhynchospora harperi	C	
	Rhynchospora inundata	W	
	Rhynchospora nitens	W	
	Rhynchospora pleiantha	SR	
	Rhynchospora tracyi	SR	
	Scleria georgiana	C	

HE-1	Depression Meadow		893334
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Burmannia biflora	W	
	Rhexia aristosa	FC2, T	
HE-2	Depression Meadow		892334
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Bartonia verna	W	
	Burmannia biflora	W	
	Rhexia aristosa	FC2, T	
	Rhynchospora wrightiana	W	
HE-3	Depression Meadow		889332
	Aristida palustris	SR	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Ludwigia linifolia	SR	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2, T	
	Rhynchospora harperi	C	
	Rhynchospora inundata	W	
	Rhynchospora tracyi	SR	
	Scleria reticularis var. reticularis	C	
	Xyris smalliana	W	
HE-4	Small Stream Pocosin		895331
	Rhynchospora inundata	W	
HE-5	Depression Meadow		896332
	Aristida palustris	SR	
	Burmannia biflora	W	
	Eleocharis equisetoides	SR	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2, T	
	Rhynchospora harperi	C	
	Rhynchospora inundata	W	
HE-6	Small Depression Pond		882329
	Burmannia biflora	W	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2, T	
	Rhexia aristosa X cubensis	undescribed taxon	
	Rhexia cubensis	SR	
	Rhynchospora scirpoides	C	
	Rhynchospora tracyi	SR	
	Rhynchospora wrightiana	W	

HE-7.	Road Meadow		880330
	Agalinis fasciculata	W	
	Rhexia aristosa	FC2, T	
	Rhynchospora pusilla	W	
	Rhynchospora nitens	W	
HE-8	Pocosin Ecotone		883329
	Dionaea muscipula	FC2, C-SC	
HE-8	Road Depression Meadow		882328
	Paspalum praecox	W	
HF-1	Small Depression Pond/Depression Meadow		900316
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Coelorachis rugosa	W	
	Dichanthelium erectifolium	SR	
	Eleocharis tricostata	W	
	Ludwigia linifolia	SR	
	Panicum tenerum	SR	
	Paspalum praecox	W	
	Rhexia aristosa	FC2, T	
	Rhynchospora tracyi	SR	
	Rhynchospora wrightiana	W	
	Scleria georgiana	C	
	Spiranthes laciniata	C	
	Xyris smalliana	W	
HF-2	Road Meadow		899316
	Aristida palustris	SR	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Rhexia aristosa	FC2, T	
	Rhynchospora inundata	W	
	Rhynchospora nitens	W	
	Rhynchospora pallida	SR	
	Rhynchospora wrightiana	W	
	Sagittaria graminea var. chapmanii	C	
HF-3	Small Depression Pond		898318
	Aristida palustris	SR	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Paspalum praecox	W	
	Rhexia aristosa	FC2, T	
	Sagittaria graminea var. chapmanii	C	
HF-3	Road Meadow		898318
	Amphicarpum purshii	SR	
HF-4	Road Meadow		898319
	Agalinis linifolia	SR	
	Rhexia aristosa	FC2, T	
	Rhexia cubensis	SR	



(HF-4 cont.)			
	Rhynchospora nitens	W	
	Sagittaria graminea var. chapmanii	C	
HF-5	Flatwoods/Pocosin Ecotone		896319
	Carex elliotii	W	
	Rhexia cubensis	SR	
	Rhynchospora pallida	SR	
HF-6	Road Meadow		894319
	Rhexia aristosa	FC2,T	
	Rhynchospora pallida	SR	
HF-7	Small Depression Pond		892318
	Eleocharis equisetoides	SR	
	Rhynchospora inundata	W	
	Xyris smalliana	W	
HF-8	Road Meadow		896311
	Amphicarpum purshii	SR	
HF-8	Small Depression Pond		896312
	Agalinis linifolia	SR	
	Aristida palustris	SR	
	Burmannia biflora	W	
	Dichanthelium erectifolium	SR	
	Eleocharis elongata	C	
	Eleocharis equisetoides	SR	
	Eleocharis tricostata	W	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhexia cubensis	SR	
	Rhynchospora inundata	W	
	Rhynchospora pleiantha	C	
HF-9	Road Meadow		889313
	Amphicarpum purshii	SR	
HF-11	Small Depression Pond		897309
	Agalinis linifolia	SR	
	Carex verrucosa	SR	
	Coelorachis rugosa	W	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhynchospora inundata	W	
	Spiranthes laciniata	C	
	Sporobolus species 1 (into HF-20)	FC2,T	
HF-12	Small Depression Pond		897308
	Eleocharis elongata	C	
	Eleocharis equisetoides	SR	

HF-13	Small Depression Pond		895309
	Carex verrucosa	SR	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhynchospora inundata	W	
	Rhynchospora tracyi	SR	
HF-14	Pocosin Ecotone		894312
	Amphicarpum purshii	SR	
	Rhexia aristosa	FC2,T	
HF-15	Small Depression Pond		894310
	Eleocharis equisetoides	SR	
	Litsea aestivalis	FC2,C	
	Scirpus etuberculatus	SR	
HF-15	Pond/Flatwoods Ecotone		894310
	Asclepias pedicellata	C	
HF-16	Small Depression Pond		892308
	Eleocharis robbinsii? (too deep to wade)	C	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhexia cubensis	SR	
	Rhynchospora inundata	W	
	Rhynchospora scirpoides	C	
HF-17	Small Depression Pond		891306
	Aristida palustris	SR	
	Burmannia biflora	W	
	Dichanthelium erectifolium	SR	
	Eleocharis equisetoides	SR	
	Eleocharis robbinsii	C	
	Panicum tenerum	SR	
	Rhexia aristosa	FC2,T	
	Rhynchospora scirpoides	C	
	Rhynchospora tracyi	SR	
	Rhynchospora wrightiana	W	
	Utricularia olivacea	T	
	Xyris smalliana	W	
HF-18	Depression Meadow		898308
	Agalinis linifolia	SR	
	Coelorachis rugosa	W	
	Paspalum praecox	W	
	Rhexia aristosa	FC2,T	
HF-19	Small Depression Pocosin		897307
	Amphicarpum purshii (into HF-20)	SR	
HF-20	Flatwoods/Pocosin Ecotone		897308
	Amphicarpum purshii	SR	
	Solidago pulchra	FC2,C	
	Sporobolus species 1	FC2,T	

HF-21	Small Depression Pond Coelorachis rugosa	W	899310
HF-22	Road Depression Meadow Juncus validus	W	902306
HF-23	Small Stream Swamp Carex albicans var. emmonsii	W	905302
HF-24	Road/Pocosin Ecotone Dionaea muscipula Rhynchospora pallida	FC2, C-SC SR	900309
HF-25	Road Depression Meadow Andropogon capillipes Burmanna biflora Dichanthelium wrightianum Dionaea muscipula Ludwigia microcarpa Paspalum praecox Polygala brevifolia Rhynchospora nitens Rhynchospora pallida Solidago pulchra Xyris baldwiniana	W W W FC2, C-SC W W W W SR FC2, C W	904310

SECTOR I

IA-1	Small Depression Pond Rhynchospora inundata Rhynchospora scirpoides	W C	886297
IA-2	Small Depression Pond Burmanna biflora Eleocharis equisetoides Eleocharis vivipara (?) Panicum tenerum Rhynchospora inundata Rhynchospora scirpoides	W SR W SR W C	890296
IA-3	Wet Pine Flatwoods Asclepias pedicellata	C	887298
IC-2	Small Depression Pond Eleocharis equisetoides Rhynchospora inundata	SR W	875279
IC-3	Small Depression Pond Eleocharis equisetoides	SR	869280

IC-4	Small Depression Pond Eleocharis equisetoides Rhynchospora inundata Sagittaria engelmanniana	SR W W	870280
IC-6	Coastal Fringe Sandhill Cladina evansii	W	859270
IC-7	Small Depression Pond Eleocharis equisetoides	SR	862270
IC-8	Coastal Fringe Sandhill Cladina evansii	W	?
IC-9	Maritime Forest Cynanchum angustifolium Iresine rhizomatosa Sageretia minutiflora	W W C	853258
IC-10	Coastal Fringe Evergreen Forest Asplenium platyneuron var. bacculum-rubrum Cornus asperifolia Rhynchospora miliacea	W C W	856262
IC-11	Seepage Meadow Eleocharis montevidensis	proposed	867259
IE-2	Pocosin Ecotone Dionaea muscipula	FC2, C-SC	873291

#### SECTOR J

JB-1	Small Stream Swamp Carex chapmanii Carex floridana	FC2, T W	819305
JC-1	Small Depression Pond Eleocharis melanocarpa	C	844290

#### SECTOR K

KA-1	Small Stream Swamp Carex floridana	W	797390
KC-1	Wet Pine Flatwoods Buchnera floridana Calamovilfa brevipilis Dionaea muscipula Pilea tenuifolia Rhynchospora pallida Solidago pulchra	W F3C, E FC2, C-SC W SR FC2, C	772377

SECTOR L

LA-1	Road Depression Meadow	727352-
	Wet Pine Flatwoods	724337
	Dionaea muscipula	FC2,C-SC
	Pleea tenuifolia	W
	Rhynchospora pusilla	W
	Xyris elliotii	SR
LB-1	Road Meadow (US 17)	725306-724337
	Savanna	
	Agalinis aphylla	C
	Agalinis fasciculata	W
	Agalinis virgata	C
	Amphicarpum purshii	SR
	Andropogon capillipes	W
	Asclepias pedicellata	C
	Bartonia verna	W
	Calamovilfa brevipilis	F3C,E
	Calopogon barbatus	W
	Dionaea muscipula	FC2,C-SC
	Gentiana autumnalis	W
	Linum floridanum var. chrysocarpum	SR
	Oxypolis ternata	FC2,C
	Pleea tenuifolia	W
	Polygala brevifolia	W
	Rhynchospora nitens	W
	Rhynchospora pallida	SR
	Rhynchospora pusilla	W
	Solidago pulchra	FC2,C
	Sporobolus species 1	FC2,T
	Tofieldia glabra	FC2,C
	Xyris baldwiniana	W
	Xyris elliotii	SR
	Xyris flabelliformis	C
LB-3	Mesic Pine Flatwoods	734330
	Carex chapmanii	FC2,T
	Carex floridana	W
LB-4	Powerline Depression Meadow	743296-747287
	Carex elliotii	W
	Polygala brevifolia	W
LC-1	Road Meadow (NC 210)	752270-745287
	Agalinis fasciculata	W
	Agalinis tenella	W
	Andropogon capillipes	W
	Dionaea muscipula	FC2,C-SC
	Xyris difformis var. curtissii	W
	Xyris elliotii	SR

LC-2	Powerline Depression Meadow	747287-764282
	Andropogon capillipes	W
	Carex elliotii	W
	Dionaea muscipula	FC2, C-SC
	Rhexia aristosa	FC2, T
	Rhynchospora oligantha	C

SECTOR M

MB-1	Mesic Pine Flatwoods	770398
	Carex floridana	W
MD-1	Small Stream Swamp	752393-
	Carex chapmanii	FC2, T 752372
	Carex floridana	W
	Scirpus lineatus	C
	Senecio glabellus	W
ME-1	Road Meadow (US 17)	728353-735387
	Oxypolis ternata	FC2, C
MF-1	Wet Pine Flatwoods, Pocosin Ecotone	776370
	Andropogon capillipes	C
	Calamovilfa brevipilis	F3C, E
	Calopogon barbatus	W
	Carex elliotii	W
	Dionaea muscipula	FC2, C-SC
	Polygala brevifolia	W
	Solidago pulchra	FC2, C

SECTOR Q

QA-1	Small Depression Pocosin	943390
	Litsea aestivalis (1984)	FC2, C
QA-2	Small Depression Pond	941391
QA-3	Depression Meadow	946402
	Anthaenantia rufa	W
	Aristida palustris	SR
	Burmannia biflora	W
	Coelorachis rugosa	W
	Dichantherium erectifolium	SR
	Dichantherium sp. 1 =Panicum hirstii	FC2, C
	Eleocharis equisetoides	SR
	Lobelia boykinii	FC2, C
	Muhlenbergia torreyana	F3C, E
	Panicum tenerum	SR
	Paspalum praecox	W
	Rhexia aristosa	FC2, T
	Rhynchospora elliotii	W
	Rhynchospora harperi	C

(QA-3 Depression Meadow cont.)		
Rhynchospora tracyi	SR	
Scleria georgiana	C	
Spiranthes laciniata	C	
Xyris smalliana	W	
QA-3 Pocosin Ecotone		946401
Amphicarpum purshii	SR	
Gentiana autumnalis	W	
Rhynchospora nitens	W	
QA-4 Wet Pine Flatwoods		940403
Andropogon capillipes	W	
QA-5 Wet Pine Flatwoods		950414
Andropogon capillipes	W	
Gentiana autumnalis	W	
QA-6 Depression Meadow		944392
Aristida palustris	SR	
Carex verrucosa	SR	
Panicum tenerum	SR	
Rhynchospora inundata	W	
QA-7 Small Stream Swamp		944424
Carex chapmanii	FC2, T	
Carex elliotii	W	
Rhynchospora miliacea	W	
Scirpus lineatus	C	
QB-1 Nonriverine Swamp Forest ( <u>Nyssa biflora</u> variant)		953375
"Peterson's Quagmire"		
QB-2 Road Meadow (Lyman Road)		943375
Anthaenania rufa	W	
Coelorachis rugosa	W	
Dionaea muscipula	FC2, C-SC	
Gentiana autumnalis	W	
Paspalum praecox	W	
Paspalum stramineum var. stramineum	proposed	
Polygala brevifolia	W	
Rhynchospora nitens	W	
Rhynchospora oligantha	SR	
Rhynchospora pallida	SR	
Scleria georgiana	C	
Scleria minor	SR	
Solidago gracillima	W	
Solidago pulchra	FC2, C	
Tofieldia glabra	FC2, C	
Xyris baldwiniana	W	

QB-3. Small Depression Pond  
Eleocharis tricostata  
Rhexia cubensis  
Rhynchospora wrightiana

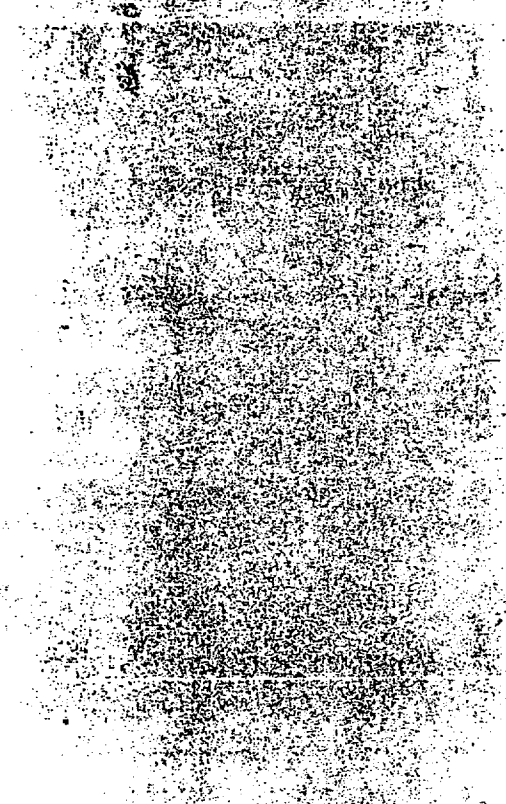
954361

W  
SR  
W

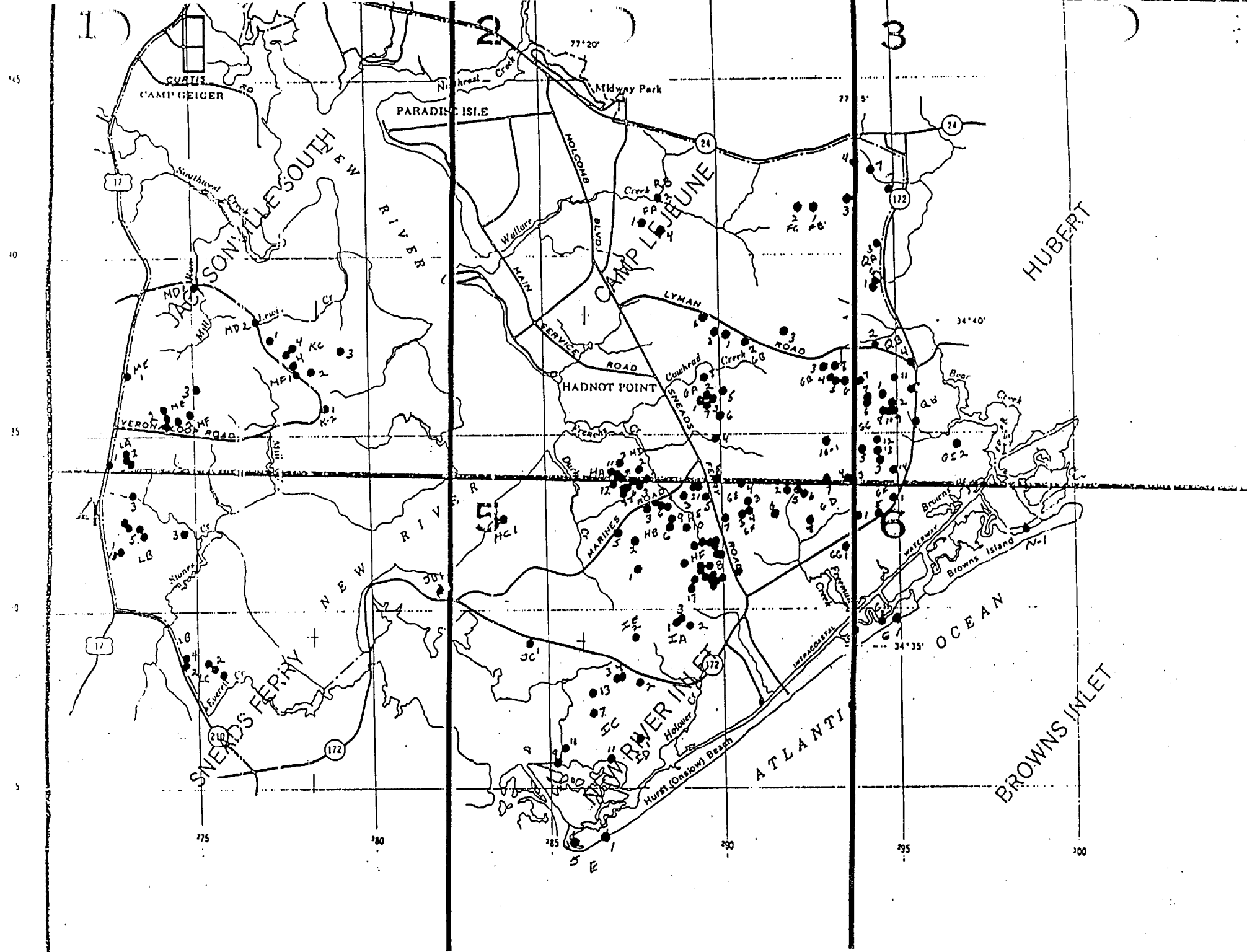
RB-1. Road Meadow  
Ludwigia microcarpa

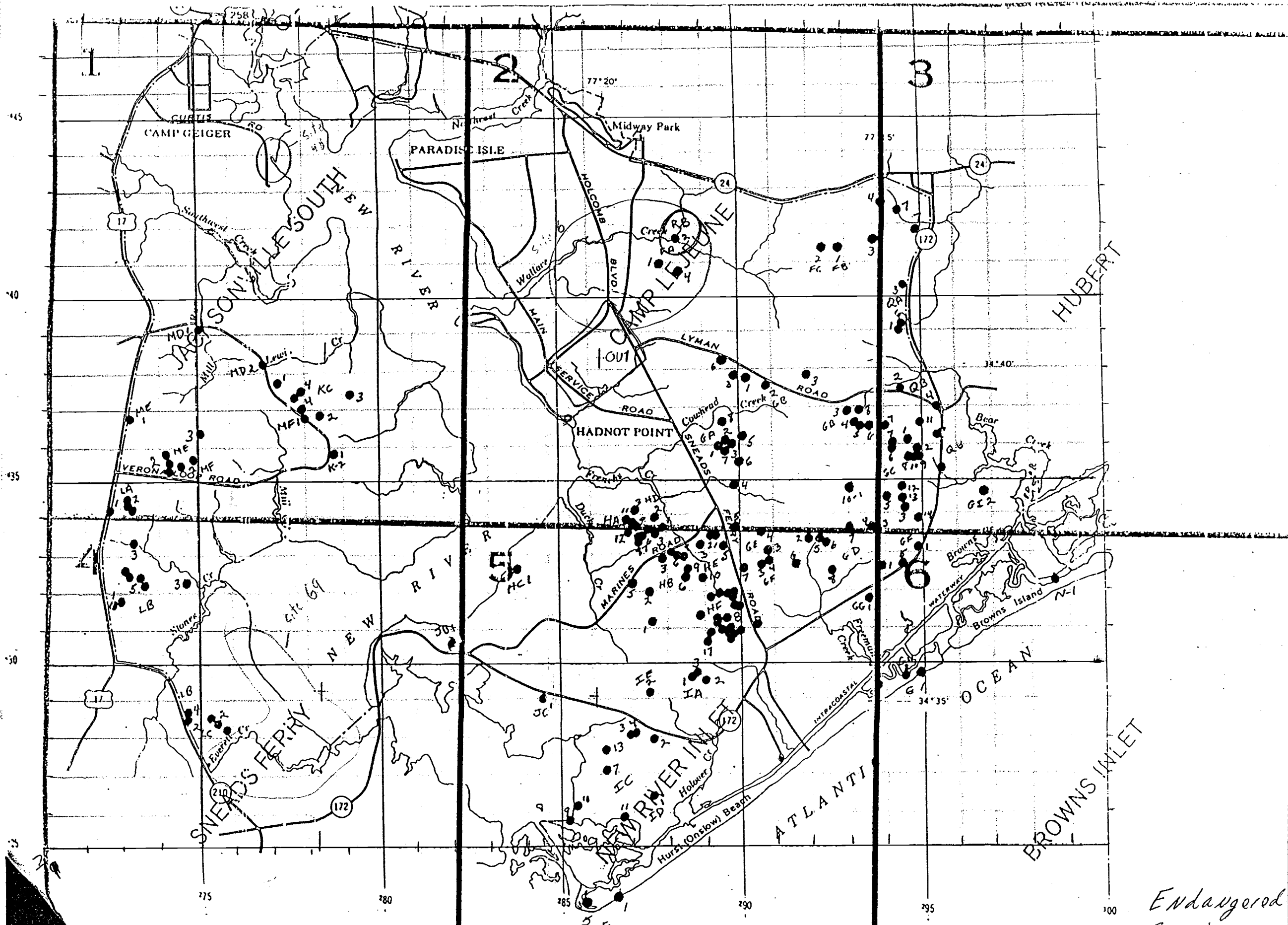
888434

W









Endangered  
Species  
01763W01Z

**APPENDIX V**  
**FISH POPULATION STATISTICS**

---

**FISH POPULATION STATISTICS FOR  
SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK AND NEW RIVER  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Atlantic Menhaden	NR-1	40	Length (cm)	11.66	12.7	10.5
			Weight (g)	15.9	16	15.8
	NR-2	5	Length (cm)	18.18	19.5	17.2
			Weight (g)	70	70	70
	NR-3	0	Length (cm)			
			Weight (g)	NC	NC	NC
	EC-2	0	Length (cm)			
Weight (g)			NC	NC	NC	
EC-3	0	Length (cm)				
		Weight (g)	NC	NC	NC	
EC-4	5	Length (cm)	14.22	19.5	12.5	
		Weight (g)	37.04	90	23.8	
UT-1	0	Length (cm)				
		Weight (g)	NC	NC	NC	
Herring	NR-1	28	Length (cm)	9.43	10.5	8.1
			Weight (g)	7.5	7.5	7.5
	NR-2	18	Length (cm)	9.15	10.1	8
			Weight (g)	6.4	6.4	6.4
	NR-3	0	Length (cm)			
			Weight (g)	NC	NC	NC
	EC-2	0	Length (cm)			
Weight (g)			NC	NC	NC	
EC-3	0	Length (cm)				
		Weight (g)	NC	NC	NC	
EC-4	3	Length (cm)	9.57	10.2	9	
		Weight (g)	6.7	6.7	6.7	
UT-1	0	Length (cm)				
		Weight (g)	NC	NC	NC	
Spot	NR-1	106	Length (cm)	7.96	9.6	6.1
			Weight (g)	6.64	7.3	6.3
	NR-2	43	Length (cm)	7.89	9.4	6.2
			Weight (g)	6.67	7	6.3
NR-3	70	Length (cm)	7.61	10.2	6.5	
		Weight (g)	5.7	5.7	5.7	
EC-2	0	Length (cm)				
		Weight (g)	NC	NC	NC	

**FISH POPULATION STATISTICS FOR  
SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Spot (Continued)	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Perch	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	4	Length (cm) Weight (g)	10.03 11.3	11.2 11.3	9 11.3
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Stripped Mullet	NR-1	5	Length (cm) Weight (g)	10.24 15	12.5 15	9.4 15
	NR-2	10	Length (cm) Weight (g)	28.04 491.5	50.3 1250	10.5 21
	NR-3	81	Length (cm) Weight (g)	11.94 24.4	36.9 550	9.6 0
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	6	Length (cm) Weight (g)	17.97 62.5	22.5 70	13.5 25
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Minnow Sp.	NR-1	0	Length (cm)			
			Weight (g)	NC	NC	NC
	NR-2	0	Length (cm)			
			Weight (g)	NC	NC	NC
	NR-3	0	Length (cm)			
			Weight (g)	NC	NC	NC
	EC-2	0	Length (cm)			
			Weight (g)	NC	NC	NC
EC-3	0	Length (cm)				
		Weight (g)	NC	NC	NC	
EC-4	0	Length (cm)				
		Weight (g)	NC	NC	NC	
UT-1	10	Length (cm)	4.23	5.4	3.2	
		Weight (g)	0.5	0.5	0.5	
Pin Fish	NR-1	24	Length (cm)	8.16	9.7	6.5
			Weight (g)	24	24	24
	NR-2	43	Length (cm)	8.16	13	7
			Weight (g)	8.53	8.8	8.3
	NR-3	60	Length (cm)	7.95	10.3	6.5
			Weight (g)	7.67	9	6.5
	EC-2	0	Length (cm)			
Weight (g)			NC	NC	NC	
EC-3	0	Length (cm)				
		Weight (g)	NC	NC	NC	
EC-4	24	Length (cm)	9.51	14.6	8.1	
		Weight (g)	4.42	20	1.1	
UT-1	0	Length (cm)				
		Weight (g)	NC	NC	NC	
Mahara	NR-1	6	Length (cm)	8.08	9.2	6.7
			Weight (g)	5.8	5.8	5.8
	NR-2	6	Length (cm)	9.35	17.5	7.2
			Weight (g)	5.8	5.8	5.8
NR-3	44	Length (cm)	7.95	9.6	6.5	
		Weight (g)	5.57	5.9	5.2	
EC-2	0	Length (cm)				
		Weight (g)	NC	NC	NC	

**FISH POPULATION STATISTICS FOR  
SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Mahara (Continued)	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Palemento	NR-1	2	Length (cm) Weight (g)	5.6 2.5	6 2.5	5.2 2.5
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	2	Length (cm) Weight (g)	6 2.5	6.1 2.5	5.9 2.5
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	1	Length (cm) Weight (g)	9.5 10	9.5 10	9.5 10
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Croaker	NR-1	40	Length (cm) Weight (g)	11.46 14.75	14.2 16.5	9.5 13
	NR-2	40	Length (cm) Weight (g)	10.41 10.65	11.8 10.8	7.4 10.5
	NR-3	66	Length (cm) Weight (g)	11.1 14.7	13.5 35	9 7.5
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	40	Length (cm) Weight (g)	11.82 15.5	14.5 17	10 15
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Pig Fish	NR-1	1	Length (cm) Weight (g)	10 2	10 2	10 2
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	1	Length (cm) Weight (g)	11.5 20	11.5 20	11.5 20
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Northern Puffer	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	2	Length (cm) Weight (g)	19.15 160	20 200	18.3 120
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Crevalle Jack	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	1	Length (cm) Weight (g)	18.5 75	18.5 75	18.5 75
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC



**FISH POPULATION STATISTICS FOR  
 SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Crevalle Jack (Continued)	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
White Perch	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	4	Length (cm) Weight (g)	10.03 11.3	11.2 11.3	9 11.3
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
Sheeps Head	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	1	Length (cm) Weight (g)	7.7 5	7.7 5	7.7 5
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
 SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Summer Flounder	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	1	Length (cm) Weight (g)	26 220	26 220	26 220
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	2	Length (cm) Weight (g)	26.75 250	30.5 300	23 200
	EC-4	4	Length (cm) Weight (g)	29.03 276.25	31.2 350	27.7 210
	UT-1	0	Length (cm)	NC	NC	NC
Eastern Mosquito	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	33	Length (cm) Weight (g)	3.39 0.45	4.9 0.45	1.6 0.45
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1		Length (cm) Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
 SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Blue Crab	NR-1	1	Length (cm) Weight (g)	12 NE	12 NE	12 NE
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	2	Length (cm) Weight (g)	15.25 220	16 225	14.5 215
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC
American Eel	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	0	Length (cm) Weight (g)	NC	NC	NC
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	1	Length (cm) Weight (g)	16 5	16 5	16 5
Oyster	NR-1	0	Length (cm) Weight (g)	NC	NC	NC
	NR-2	1	Length (cm) Weight (g)	26 220	26 220	26 220
	NR-3	0	Length (cm) Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
 SITE 69 - UNNAMED TRIBUTARY, EVERETT CREEK, AND NEW RIVER  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Oyster (Continued)	EC-2	0	Length (cm) Weight (g)	NC	NC	NC
	EC-3	0	Length (cm) Weight (g)	NC	NC	NC
	EC-4	0	Length (cm) Weight (g)	NC	NC	NC
	UT-1	0	Length (cm) Weight (g)	NC	NC	NC

NR = New River; EC = Everett Creek; UT = Unnamed Tributary  
 NC = Not Collected

**FISH POPULATION STATISTICS FOR  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Atlantic Menhaden	HC03	1	Length (cm)	5.0	5.0	5.0
			Weight (g)	2.5	2.5	2.5
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HMO3	61	Length (cm)	5.6	6.5	4.5
			Weight (g)	2.3	4.0	1.8
Blue Fish	HC03	3	Length (cm)	8.7	11	7
			Weight (g)	10.7	17	7
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Spot	HC03	12	Length (cm)	9.0	14.0	3.5
			Weight (g)	16.8	40	2.5
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM03	7	Length (cm)	6.8	12.0	5.0
			Weight (g)	6.8	25.0	2.5
White Perch	HC03	1	Length (cm)	18.5	18.5	18.5
			Weight (g)	105.0	105.0	105.0
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Stripped Mullet	HC03	3	Length (cm)	13.4	15.25	12.5
			Weight (g)	28.3	45.0	20.0
	HM02	11	Length (cm)	34.8	39.5	31.0
			Weight (g)	438.2	640.0	320.0
	HM03	2	Length (cm)	10.5	14.5	6.5
			Weight (g)	21.25	40.0	2.5
Hogchoker	HC03	1	Length (cm)	5.5	5.5	5.5
			Weight (g)	5	5	5
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM03	1	Length (cm)	6	6	6
			Weight (g)	10	10	10

**FISH POPULATION STATISTICS FOR  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Pin Fish	HC03	5	Length (cm)	11.7	13.0	10.5
			Weight (g)	28.8	37.0	22.0
	HM02	1	Length (cm)	17.5	17.5	17.5
			Weight (g)	80.0	80.0	80.0
	HM03	1	Length (cm)	5.0	5.0	5.0
			Weight (g)	2.5	2.5	2.5
Black Drum	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	1	Length (cm)	28	28	28
			Weight (g)	350	350	350
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Atlantic Croaker	HC03	5	Length (cm)	9.8	11.5	7.5
			Weight (g)	12.5	20.0	2.5
	HM02	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Spotted Sunfish	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	2	Length (cm)	16.3	17	15.5
			Weight (g)	87.5	110	65
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Largemouth Bass	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	1	Length (cm)	34	34	34
			Weight (g)	540	540	540
	MH03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Blue Gill	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	1	Length (cm)	17	17	17
			Weight (g)	105	105	105
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC

**FISH POPULATION STATISTICS FOR  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

Common Name	Station Number	Total Number	Parameter (Units)	Average	Maximum	Minimum
Pumpkinseed	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	2	Length (cm)	13.3	15	11.5
			Weight (g)	40	50	30
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Long-nose Gar	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	3	Length (cm)	76.2	83	72.5
			Weight (g)	1,630	2,000	1,250
	HM03	1	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
Summer Flounder	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	1	Length (cm)	29.5	29.5	29.5
			Weight (g)	250	250	250
	HM03	4	Length (cm)	31.0	43	20.5
			Weight (g)	365	850	90
Gizzard Shad	HC03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC
	HM02	2	Length (cm)	33.5	34	33
			Weight (g)	470	480	460
	HM03	0	Length (cm)	NC	NC	NC
			Weight (g)	NC	NC	NC

HC = Hadnot Creek; HM = Holland Mill Creek  
 NC = Not Collected

**APPENDIX W**  
**BENTHIC MACROINVERTEBRATE**

---





SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA

SPECIES	Unnamed Tributary									Everett Creek							
	69-UT1-BN1	69-UT1-BN2	69-UT1-BN3	69-UT2-BN1	69-UT2-BN2	69-UT2-BN3	69-UT3-BN1	69-UT3-BN2	69-UT3-BN3	Total	69-EC3-BN1	69-EC3-BN2	69-EC3-BN3	69-EC4-BN1	69-EC4-BN2	69-EC4-BN3	Total
<i>Glycine solitaria</i>							1			1		1		5	13	4	23
Spionida																	
Spionidae																	
<i>Streblospio benedicti</i>							2	2		4	13	22	26	2	8	8	79
Hirudinea																	
Pisicolidae																	
<i>Myzobdella lugubris</i>																	
Ariciida																	
Orbiniidae																	
<i>Scoloplos sp.</i>														3	6		9
MOLLUSCA																	
Gastropoda																	
Prosobranchia																	
Neogastropoda																	
Nassariidae																	
<i>Ilyanassa obsoleta</i>														3			3
Bivalvia																	
Heterodontida																	
Maclridae																	
<i>Anatina anatina</i>							1	2		3				24	20	13	57
RHYNCHOCOELA																	
Anopla																	
Paleonemertea																	
Carinomidae																	
<i>Carinoma tremaphoros</i>									1	1					3	1	4
<b>TOTAL SPECIES</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>12</b>
<b>TOTAL ORGANISMS</b>	<b>2</b>	<b>3</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>18</b>	<b>2</b>	<b>41</b>	<b>14</b>	<b>23</b>	<b>28</b>	<b>60</b>	<b>109</b>	<b>67</b>	<b>301</b>



SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA

SPECIES	New River									Total
	69-NR1-BN1	69-NR1-BN2	69-NR1-BN3	69-NR2-BN1	69-NR2-BN2	69-NR2-BN3	69-NR3-BN1	69-NR3-BN2	69-NR3-BN3	
<i>Glycinde solitaria</i>	6	3	14	8	14	10	14	13	12	94
Spionida										
Spionidae										
<i>Streblospio benedicti</i>	2	5	20	7	5	14	3	7	18	81
Hirudinea										
Pisicolidae										
<i>Myzobdella lugubris</i>	1	1								2
Ariciida										
Orbiniidae										
<i>Scoloplos sp.</i>			1		1		1		5	8
MOLLUSCA										
Gastropoda										
Prosobranchia										
Neogastropoda										
Nassariidae										
<i>Hyassina obsoleta</i>	1		1						1	3
Bivalvia										
Heterodontida										
Mactridae										
<i>Anatina anatina</i>	14	1	18	3	6	1	9	4	11	67
RHYNCHOCOELA										
Anopla										
Paleonemertea										
Carinomidae										
<i>Carinoma tremaphoros</i>	2	1	3	6	3	7	1	10		33
<b>TOTAL SPECIES</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>12</b>
<b>TOTAL ORGANISMS</b>	<b>58</b>	<b>29</b>	<b>114</b>	<b>156</b>	<b>127</b>	<b>169</b>	<b>75</b>	<b>189</b>	<b>157</b>	<b>1074</b>

SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
REMEDIAL INVESTIGATION, CTO-0212  
MCB CAMP LEJEUNE, NORTH CAROLINA

SPECIES	UNNAMED TRIBUTARY									EVERETT CREEK						NEW RIVER									
	69-UT1-BN1	69-UT1-BN2	69-UT1-BN3	69-UT2-BN1	69-UT2-BN2	69-UT2-BN3	69-UT3-BN1	69-UT3-BN2	69-UT3-BN3	69-EC3-BN1	69-EC3-BN2	69-EC3-BN3	69-EC4-BN1	69-EC4-BN2	69-EC4-BN3	69-NR1-BN1	69-NR1-BN2	69-NR1-BN3	69-NR2-BN1	69-NR2-BN2	69-NR2-BN3	69-NR3-BN1	69-NR3-BN2	69-NR3-BN3	
<b>ARTHROPODA</b>																									
Insecta																									
Pterygota																									
Diptera																									
Chironomidae																									
<i>Tribelos jucundum</i>															1										
Crustacea																									
Myzodacea																									
Myzidae																									
<i>Myzopistis bigelowi</i>														3	21		3	1							
Cumacea																									
Bodotriidae																									
<i>Mancocuma altera</i>													2												
Isopoda																									
Idoteidae																									
Caecidotea sp.																									
<i>Edotea triloba</i>									50				7	3	4										
<b>ANNELIDA</b>																									
Polychaeta																									
Phyllodocta																									
Nereidae																									
<i>Nereis succinea</i>								22					8	3	3	2	3	1	1		1		2	1	
Capitellida																									
Capitellidae																									
<i>Capitella capitata</i>																10	7	2	3	3	5		1	2	
<i>Heteromastus filiformis</i>				100			20	56		7	7	18	48	33	43	48	46	80	74	75	63	79	68		
Oligochaeta																									
Tubificida																									
Tubificidae																									
<i>Isochaetides curvisetosus</i>		33	40																						
<i>Limnodrilus hoffmeisteri</i>			10																1						
<i>Limnodrilus udekenianus</i>	100	67	30																						
<i>Aubdrilus limnobiatus</i>			20																						
Goniadidae																									
<i>Glycine solitaria</i>							20				4		8	12	6	10	10	12	5	11	6	19	7	8	
Sponida																									
Sponidae																									
<i>Sireleboris benedicti</i>							40	11			93	96	93	3	7	12	3	17	18	4	4	8	4	4	11



**SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	Hadnot Creek	Holland Mill Creek		
	HC03	HM02	HM03	Total
<b>NEMERTEA</b>				
Anopla				
Heteronemertea				
Lineidae				
<i>Micrura leidyl</i>	8		9	9
<b>ARTHROPODA</b>				
Insecta				
Diptera				
Chironomidae				
<i>Chironomidae decorus gr.</i>		376	1	377
Crustacea				
Amphipoda				
Corophiidae				
<i>Corophium lacuatre</i>	82			
Decapoda				
Palaemonidae				
<i>Palaemonetes pugic</i>		1		1
Tanaidacea				
Tanaidae				
<i>Leptochelia rapox</i>	80			
<b>ANNELIDA</b>				
Polychaeta				
Phyllodocida				
Nereidae				
<i>Nereis succinea</i>	24	22		22
Phyllodocidae				
<i>Eteone heteropoda</i>	1			
Capitellida				
Capitellidae				
<i>Heteromastus filiformis</i>	23		3	3
Terebellida				
Ampharetidae				
<i>Hypaniola grayi</i>		5		5

**SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	Hadnot Creek	Holland Mill Creek		
	HC03	HM02	HM03	Total
Goniadidae				
Spionidae				
<i>Streblospio benedicti</i>			1	1
Ariciida				
Orbiniidae				
<i>Scoloplos fragilis</i>			31	31
<b>MOLLUSCA</b>				
Bivalvia				
Mytiloida				
Mytilidae				
<i>Geukensia demissa</i>	1			
Veneroida				
Tellinidae				
<i>Macoma tenta</i>	25		49	49
Heterodontida				
Mactridae				
<i>Mullinia lateralis</i>			3	3
<b>TOTAL SPECIES</b>	<b>8</b>	<b>4</b>	<b>7</b>	<b>10</b>
<b>TOTAL ORGANISMS</b>	<b>244</b>	<b>404</b>	<b>97</b>	<b>501</b>



**SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	Hadnot Creek	Holland Mill Creek	
	HC03	HM02	HM03
<b>NEMERTEA</b>			
Anopla			
Heteronemertea			
Lineidae			
<i>Micrura leidyl</i>	3		9
<b>ARTHROPODA</b>			
Insecta			
Diptera			
Chironomidae			
<i>Chironomidae decorus gr.</i>		93	1
Crustacea			
Amphipoda			
Corophiidae			
<i>Corophium lacuatre</i>	34		
Decapoda			
Palaemonidae			
<i>Palaemonetes pugic</i>		0.2	
Tanaidacea			
Tanaidae			
<i>Leptochelia rapox</i>	33		
<b>ANNELIDA</b>			
Polychaeta			
Phyllodocida			
Nereidae			
<i>Nereis succinea</i>	10	5.5	
Phylliodocidae			
<i>Eteone heteropoda</i>	0.5		
Capitellida			
Capitellidae			
<i>Heteromastus filiformis</i>	9		3

**SUMMARY OF BENTHIC MACROINVERTEBRATE SPECIES  
 REFERENCE STATIONS - HADNOT CREEK AND HOLLAND MILL CREEK  
 REMEDIAL INVESTIGATION, CTO-0212  
 MCB CAMP LEJEUNE, NORTH CAROLINA**

SPECIES	Hadnot Creek	Holland Mill Creek	
	HC03	HM02	HM03
Terebellida			
Ampharetidae			
<i>Hypaniola grayi</i>		1.3	
Goniadidae			
Spionidae			
<i>Streblospio benedicti</i>			1
Ariciida			
Orbiniidae			
<i>Scoloplos fragilis</i>			32
<b>MOLLUSCA</b>			
Bivalvia			
Mytiloidea			
Mytilidae			
<i>Geukensia demissa</i>	0.5		
Veneroidea			
Tellinidae			
<i>Macoma tenta</i>	10		51
Heterodontida			
Mactridae			
<i>Mullinia lateralis</i>			3
<b>TOTAL INDIVIDUAL PERCENT</b>	<b>100</b>	<b>100</b>	<b>100</b>

**APPENDIX X**  
**PRE-TREATABILITY STUDY**  
**GROUNDWATER INVESTIGATION RESULTS**

---

**UVB/KGB TREATABILITY STUDY UPDATE  
OPERABLE UNIT NO. 14 (SITE 69)  
MCB CAMP LEJEUNE, NORTH CAROLINA  
NOVEMBER 1, 1995**

**September 1995 Sampling Results**

In March 1995, a supplemental groundwater investigation was performed in which monitoring wells 69-GW15 (13 feet deep) and 69-GW15IW (60 feet deep) were installed at Site 69 to monitor the shallow groundwater and the upper part of the Castle Hayne Aquifer in the suspected source area. High levels of volatile organic compounds (VOCs) were detected in these wells verifying the source area and indicating that the vertical extent of groundwater contamination most likely exceeded the depth of well 69-GW15IW (60 feet). Baker had originally planned to determine the vertical extent of contamination in this area during the Treatability Study by installing a "pilot hole" and performing in situ groundwater sampling (i.e., at 10-ft. intervals) prior to installation of the UVB aeration well. However, based on comments recently received from the North Carolina Department of Environment, Health, and Natural Resources (NC DEHNR) (August 11, 1995) and subsequent discussions with the Treatability Subcontractors (SBP Technologies, Inc. and IEG Technologies Corporation), it was determined that the vertical extent of groundwater contamination may impact the type of UVB well (i.e., standard or reverse circulation) and equipment used in the Treatability Study.

Since the size and type of UVB well must be determined prior to mobilization and installation of the UVB system, an additional field effort was performed in late September to evaluate the vertical extent of contamination near wells 69-GW15 and 69-GW15IW at Site 69. Specifically, the following activities were performed during this field effort:

- Mobilization of one roll-off box and 1000-gallon poly-tank for investigation-derived waste (IDW) containment for this effort and for the Treatability Study.
- Clearance of all Treatability Study well locations for chemical warfare materials and unexploded ordnance (UXO) by the Army Technical Escort Unit (TEU) and Baker's UXO subcontractor.
- Pilot hole sampling (hydropunch) from 50 feet to 70 feet.
- Installation and sampling of wells 69-GW15UW (37-foot depth) and 69-GW15DW (120-foot depth) for VOC analysis (EPA Method 601).

Well 69-GWUW was originally scheduled to be installed with the other UVB monitoring wells during the first phase of on-site Treatability Study work. However, since there are currently no on-site wells screened in the 20-ft. to 40-ft. interval, the depth of the static water table (assumed to be 25-ft. to 35-ft.) required verification. It was desirable to verify this depth during this field effort so that the drilling scope of work could be finalized prior to mobilization for the Treatability Study. The locations of the four monitoring wells which make up the GW15 well cluster are shown in Figure 4-2 (attached).

As shown above, all Treatability Study well locations were located and cleared during this field effort so that remobilization of the TEU and UXO subcontractor will not be required for the Treatability Study. It was originally planned to perform the hydropunch sampling down to 120 feet; however, it was discontinued at 70 feet due to technical difficulties (the disposable tips could not be adequately dislodged due to the tightness of the formation).

The results of the September groundwater investigation are summarized in the attached table. As shown in this table, significant contamination (primarily TCE, 1,2-DCE, and vinyl chloride) was detected in the upper Castle Hayne Aquifer between 37 feet and 70 feet below ground surface (bgs). Total VOCs in this depth interval ranged as high as 4,400  $\mu\text{g/L}$ . The shallow groundwater monitoring well (69-GW15) also exhibited high levels of contamination, as were detected in the March 1995 sampling round. With respect to well 69-GW15DW, a substantial decrease in VOC concentrations is observed from the 70 foot to 120 foot depth.

### **UVB/KGB Treatability Study Strategy**

The September 1995 sampling results do not impact the planned KGB treatability study at Site 69 for the shallow aquifer. With respect to the UVB treatability study, Baker proposes to perform the study on the upper portion of the Castle Hayne Aquifer using a 75-foot deep UVB treatment well. Proceeding with the UVB/KGB treatability study will enable the in-well aeration technology to be evaluated under a controlled set of conditions using the most contaminated part of the aquifer. The study will yield valuable information for the Feasibility Study by answering the following questions:

- What degree of VOC stripping is achieved by the KGB and UVB systems?
- Is a circulation cell actually created by both the KGB and UVB systems?
- What is the sphere of influence established by each system?

During the treatability study, additional deep monitoring wells will be installed to further characterize the vertical extent of contamination. These additional deep monitoring wells will consist of at least one well (approximately 200 ft. deep) near the GW15 cluster and possible 2 to 3 downgradient wells (200 ft. deep) if significant contamination is detected in the 200-ft. well in the GW15 cluster. Groundwater elevation and contaminant data collected during the UVB study (from the UVB monitoring wells to be installed) will aid in the selection of deep monitoring well locations.

Once the treatability study and additional groundwater investigation are completed, the data will be incorporated into the RI/FS documents. If the UVB treatability study is successful and it is determined that a deeper zone of groundwater contamination requires treatment, the empirical data collected during the study will be used to better calibrate the UVB model so that the circulation zone can be predicted for the new treatment depth.

**POSITIVE DETECTIONS SUMMARY**  
**SEPTEMBER 1995 GROUNDWATER SAMPLING RESULTS ( $\mu\text{g/L}$ )**  
**VOLATILE ORGANIC COMPOUNDS**  
**OPERABLE UNIT NO. 14 (SITE 69)**  
**MCB CAMP LEJEUNE, NORTH CAROLINA**

CONTAMINANT	MONITORING WELLS AND HYDROPUNCH LOCATIONS						
	69-GW15 (13 ft.)	69-GW15UW (37 ft.)	69-GW15IW (60 ft.)	HP-50 (50 ft.)	HP-60 (60 ft.)	HP-70 (70 ft.)	69-GW15DW (120 ft.)
Vinyl Chloride	240	1,600	180	ND	ND	ND	ND
trans-1,2-Dichloroethene	190	2,300	54	6.9	78	300	8.85
Trichloroethene	80	320	3,000	56	820	4,100	185
Chlorobenzene	520	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	170	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	200	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,000	ND	ND	ND	ND	ND	ND

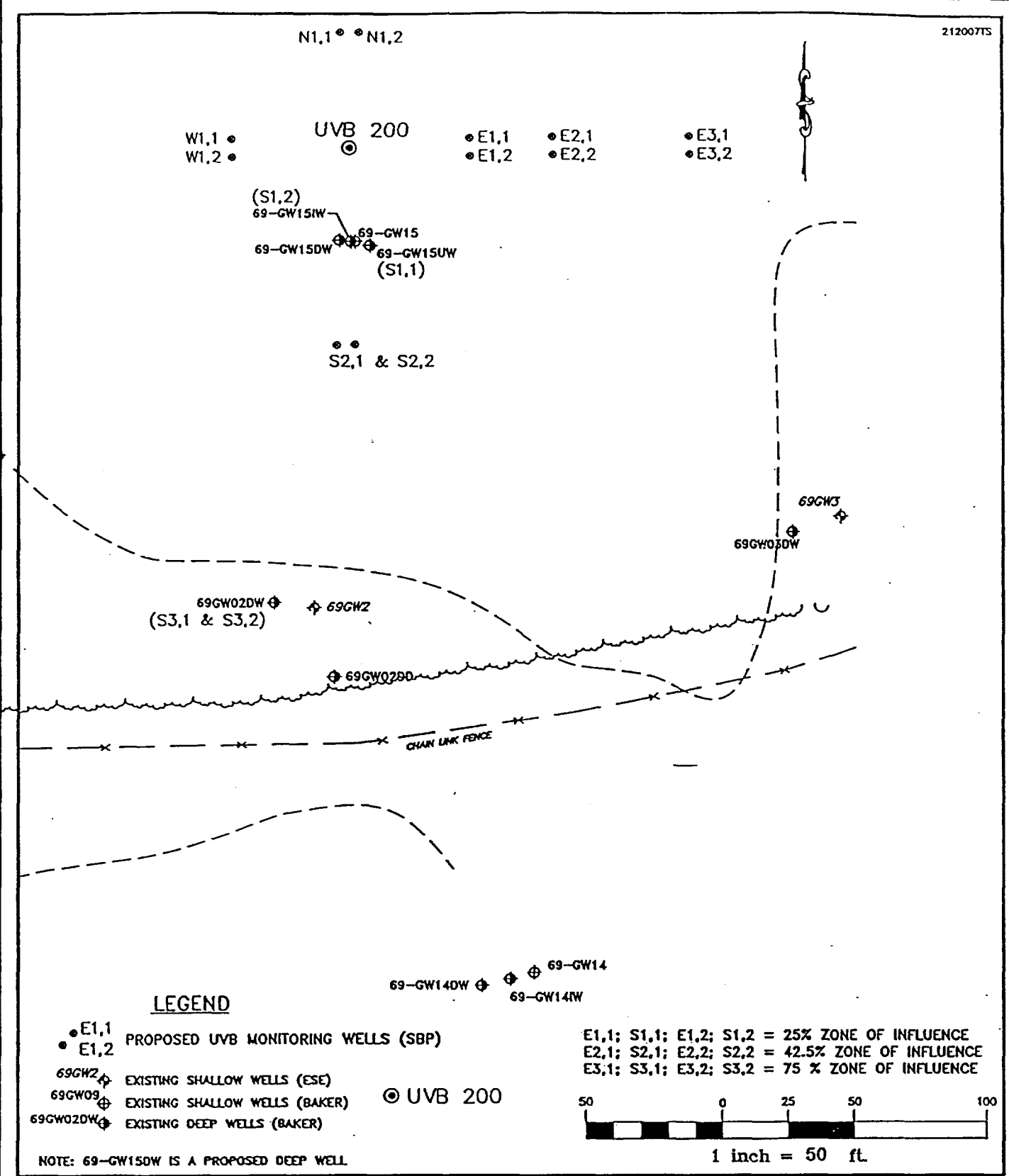
Notes:

Well depths shown in parentheses.

HP = Hydropunch sample (sample depths shown in parentheses)

ND = Not Detected

Concentrations shown for well 69-GW15DW-01 are an average of the sample and the duplicate.



**LEGEND**

- E1,1 PROPOSED UVB MONITORING WELLS (SBP)
- E1,2
- 69GW2 ⊕ EXISTING SHALLOW WELLS (ESE)
- 69GW9 ⊕ EXISTING SHALLOW WELLS (BAKER)
- 69GW02DW ⊕ EXISTING DEEP WELLS (BAKER)
- ⊙ UVB 200

E1,1; S1,1; E1,2; S1,2 = 25% ZONE OF INFLUENCE  
 E2,1; S2,1; E2,2; S2,2 = 42.5% ZONE OF INFLUENCE  
 E3,1; S3,1; E3,2; S3,2 = 75% ZONE OF INFLUENCE



1 inch = 50 ft.

NOTE: 69-GW15DW IS A PROPOSED DEEP WELL

**SBP Technologies, Inc.**  
 Environmental Engineers  
 & Bioremediation Specialists  
 A Subsidiary of The EICON Group, Inc.  
 Connecticut, Florida, Louisiana  
 New York, Maryland

PROJECT TITLE SITE 69 - RIFLE RANGE CHEMICAL DUMP			
DWG. TITLE	UVB MONITORING WELLS SCALE	1"=50'	
DRAWN BY	AJM (file 212007TS)	FIGURE No.	4-2
DATE	09-JUL-1995	PROJECT NO.	S5048.10
MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA			