




# Environmental Laboratory Certification Program

*In accordance with the provisions of Regulation 61-81, entitled "State Environmental Laboratory Certification Regulations"*

**GEOCHEMICAL TESTING  
2005 N CENTER AVE  
SOMERSET, PENNSYLVANIA 15501**

*is hereby certified to perform analyses as documented on the attached parameter list(s). This certification does not guarantee validity of the data generated, but indicates the laboratory's adherence to prescribed methodology, quality control, records keeping, and reporting procedures. This certificate is the property of S.C. DHEC and must be surrendered upon demand. This certificate is non-transferable and is valid only for the parameters and methodology listed on the attached parameter list(s).*

Laboratory Director: TIMOTHY W BERGSTRESSER  
Certifying Authority: PA  
Date of Issue: January 18, 2022  
Date of Expiration: January 31, 2023  
Certificate Number: 89022001

  
\_\_\_\_\_  
Program Manager  
Office of Environmental Laboratory Certification

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM**

**GEOCHEMICAL TESTING (Laboratory ID 89022)**  
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**CLEAN WATER ACT**

**INORGANIC - DEMAND**

TOTAL ORGANIC CARBON (TOC)

SM 5310 C-2014

PERSULFATE OXIDATION (TOC)

**INORGANIC - MINERAL**

ALKALINITY  
 CHLORIDE  
 HYDROGEN-ION CONC. (PH)  
 SPECIFIC CONDUCTANCE  
 SULFATE

ASTM D1067-11  
 EPA 300.0 (1993)  
 SM 4500-H B-2011  
 EPA 120.1 (1982)  
 EPA 300.0 (1993)

ELECTROMETRIC ENDPOINT OR PHENOLPHTHALEIN ENDPOINT  
 ION CHROMATOGRAPHY  
 ELECTROMETRIC MEASUREMENT  
 WHEATSTONE BRIDGE  
 ION CHROMATOGRAPHY

**INORGANIC - MISCELLANEOUS**

CYANIDE, TOTAL  
 CYANIDE, TOTAL  
 CYANIDE, TOTAL  
 OIL & GREASE  
 SULFIDE  
 SULFIDE

ASTM D7511-12  
 SM 4500-CN B,C-2016  
 SM 4500-CN E-2016  
 EPA 1664B (2010)  
 SM 4500-S2 B-2011  
 SM 4500-S2 D-2011

FLOW INJ/UV DIG GAS DIFF AMPEROMETRY  
 SAMPLE PRETREATMENT, MANUAL DISTILLATION  
 SPECTROPHOTOMETRIC (MANUAL)  
 OIL & GREASE - HEM/SGT-HEM  
 SEPARATION OF SOLUBLE AND INSOLUBLE SULFIDES  
 COLORIMETRIC (METHYLENE BLUE)

**INORGANIC - NUTRIENT**

AMMONIA-NITROGEN  
 NITRATE-NITROGEN

EPA 350.1 (1993)  
 EPA 300.0 (1993)

MANUAL DISTILLATION WITH AUTOMATED PHENATE  
 ION CHROMATOGRAPHY

**INORGANIC - RESIDUE**

RESIDUE, FILTERABLE (TDS)  
 RESIDUE, NONFILTERABLE (TSS)

SM 2540 C-2015  
 SM 2540 D-2015

GRAVIMETRIC (180)  
 GRAVIMETRIC 103-105

**SOLID & HAZARDOUS WASTES**

**HERBICIDES**

CHLORINATED HERBICIDES BY GC

EPA 8151A (1996)

**INORGANIC - TRACE METAL**

ANTIMONY  
 ANTIMONY  
 ARSENIC

EPA 6010D (2018)  
 EPA 6020B (2014)  
 EPA 6010D (2018)

ICP/AES  
 ICP/MS  
 ICP/AES

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**SOLID & HAZARDOUS WASTES**

**INORGANIC - TRACE METAL**

ARSENIC	EPA 6020B (2014)	ICP/MS
BARIUM	EPA 6010D (2018)	ICP/AES
BERYLLIUM	EPA 6010D (2018)	ICP/AES
BERYLLIUM	EPA 6020B (2014)	ICP/MS
CADMIUM	EPA 6010D (2018)	ICP/AES
CALCIUM	EPA 6010D (2018)	ICP/AES
CHROMIUM	EPA 6010D (2018)	ICP/AES
COBALT	EPA 6010D (2018)	ICP/AES
COPPER	EPA 6010D (2018)	ICP/AES
IRON	EPA 6010D (2018)	ICP/AES
LEAD	EPA 6010D (2018)	ICP/AES
LEAD	EPA 6020B (2014)	ICP/MS
MAGNESIUM	EPA 6010D (2018)	ICP/AES
MANGANESE	EPA 6010D (2018)	ICP/AES
MERCURY	EPA 7470A (1994)	COLD VAPOR TECHNIQUE LIQUID
METALS DIGESTION	EPA 3010A (1992)	AQUEOUS ACID DIGESTION TOTAL METALS FLAA OR ICP
METALS DIGESTION	EPA 3050B (1996)	SOLID ACID DIGESTION
MOLYBDENUM	EPA 6010D (2018)	ICP/AES
NICKEL	EPA 6010D (2018)	ICP/AES
POTASSIUM	EPA 6010D (2018)	ICP/AES
SELENIUM	EPA 6010D (2018)	ICP/AES
SELENIUM	EPA 6020B (2014)	ICP/MS
SILVER	EPA 6010D (2018)	ICP/AES
SODIUM	EPA 6010D (2018)	ICP/AES
THALLIUM	EPA 6010D (2018)	ICP/AES
THALLIUM	EPA 6020B (2014)	ICP/MS
TIN	EPA 6010D (2018)	ICP/AES
VANADIUM	EPA 6010D (2018)	ICP/AES
ZINC	EPA 6010D (2018)	ICP/AES

**PCBS AND PESTICIDES**

ORGANOCHLORINE PESTICIDES BY GC	EPA 8081B (2007)	EPA 3535A (2007)
ORGANOCHLORINE PESTICIDES BY GC	EPA 8081B (2007)	EPA 3510C (1996)
POLYCHLORINATED BIPHENYLS BY GC	EPA 8082A (2007)	EPA 3535A (2007)

**SEMI-VOLATILES**

EDB & DBCP BY MICROEXTRACTION AND GC	EPA 8011 (1992)	
SEMIVOLATILE ORGANICS BY GC/MS	EPA 8270E (2018)	EPA 3520C (1996)

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**SOLID & HAZARDOUS WASTES**

**SEMI-VOLATILES**

SEMIVOLATILE ORGANICS BY GC/MS

EPA 8270E (2018)

EPA 3535A (2007)

**VOLATILES (VOCS)**

VOLATILE ORGANICS BY GC/MS

EPA 8260D (2018)

EPA 5030B (1996)

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SOLID & HAZARDOUS WASTES

-----HERBICIDES-----

EPA 8151A (1996)

2,4,5-T  
2,4,5-TP (SILVEX)  
2,4-D  
DINOSEB  
PENTACHLOROPHENOL

-----PCBS AND PESTICIDES-----

EPA 8081B (2007)  
EPA 3510C (1996)

4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
ALDRIN  
ALPHA-BHC  
BETA-BHC  
CHLORDANE  
DELTA-BHC  
DIELDRIN  
ENDOSULFAN I  
ENDOSULFAN II  
ENDOSULFAN SULFATE  
ENDRIN  
ENDRIN ALDEHYDE  
GAMMA-BHC (LINDANE)  
HEPTACHLOR  
HEPTACHLOR EPOXIDE  
HEXACHLOROBENZENE  
METHOXYCHLOR  
TOXAPHENE

EPA 8081B (2007)  
EPA 3535A (2007)

4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
ALDRIN  
ALPHA-BHC  
BETA-BHC  
CHLORDANE  
DELTA-BHC  
DIELDRIN

EPA 8081B (2007)  
EPA 3535A (2007)

ENDOSULFAN I  
ENDOSULFAN II  
ENDOSULFAN SULFATE  
ENDRIN  
ENDRIN ALDEHYDE  
GAMMA-BHC (LINDANE)  
HEPTACHLOR  
HEPTACHLOR EPOXIDE  
HEXACHLOROBENZENE  
METHOXYCHLOR  
TOXAPHENE

EPA 8082A (2007)  
EPA 3535A (2007)

PCB-1016 (AROCLOR-1016)  
PCB-1221 (AROCLOR-1221)  
PCB-1232 (AROCLOR-1232)  
PCB-1242 (AROCLOR-1242)  
PCB-1248 (AROCLOR-1248)  
PCB-1254 (AROCLOR-1254)  
PCB-1260 (AROCLOR-1260)

-----SEMI-VOLATILES-----

EPA 8011 (1992)

1,2-DIBROMO-3-CHLOROPROPANE(DBCP)  
1,2-DIBROMOETHANE (EDB)

EPA 8270E (2018)  
EPA 3520C (1996)

1,4-PHENYLENEDIAMINE  
A,A-DIMETHYLPHENETHYLAMINE

EPA 8270E (2018)  
EPA 3535A (2007)

1,2,4,5-TETRACHLOROBENZENE  
1,3,5-TRINITROBENZENE (1,3,5-TNB)  
1,3-DINITROBENZENE (1,3-DNB)  
1,4-NAPHTHOQUINONE  
1-NAPHTHYLAMINE  
2,3,4,6-TETRACHLOROPHENOL

EPA 8270E (2018)  
EPA 3535A (2007)

2,4,5-TRICHLOROPHENOL  
2,4,6-TRICHLOROPHENOL  
2,4-DICHLOROPHENOL  
2,4-DIMETHYLPHENOL  
2,4-DINITROPHENOL  
2,4-DINITROTOLUENE (2,4-DNT)  
2,6-DICHLOROPHENOL  
2,6-DINITROTOLUENE (2,6-DNT)  
2-ACETYLAMINOFUORENE  
2-CHLORONAPHTHALENE  
2-CHLOROPHENOL  
2-METHYLNAPHTHALENE  
2-METHYLPHENOL  
2-NAPHTHYLAMINE  
2-NITROANILINE  
2-NITROPHENOL  
3,3-DICHLOROBENZIDINE  
3,3-DIMETHYLBENZIDINE  
3-METHYLCHOLANTHRENE  
3-METHYLPHENOL  
3-NITROANILINE  
4,6-DINITRO-2-METHYLPHENOL  
4-AMINOBIHENYL  
4-BROMOPHENYLPHENYL ETHER  
4-CHLORO-3-METHYLPHENOL  
4-CHLOROANILINE  
4-CHLOROPHENYL PHENYL ETHER  
4-METHYLPHENOL  
4-NITROANILINE  
4-NITROPHENOL  
5-NITRO-O-TOLUIDINE  
7,12-DIMETHYLBENZ(A)ANTHRACENE  
ACENAPHTHENE  
ACENAPHTHYLENE  
ACETOPHENONE  
ANTHRACENE  
BENZO(A)ANTHRACENE  
BENZO(A)PYRENE  
BENZO(B)FLUORANTHENE  
BENZO(G,H,I)PERYLENE  
BENZO(K)FLUORANTHENE  
BENZYL ALCOHOL  
BIS(2-CHLORO-1-METHYLETHYL)ETHER  
BIS(2-CHLOROETHOXY)METHANE  
BIS(2-CHLOROETHYL)ETHER

EPA 8270E (2018)  
EPA 3535A (2007)

BIS(2-ETHYLHEXYL)PHTHALATE  
BUTYL BENZYL PHTHALATE  
CHLOROBENZILATE  
CHRYSENE  
DI-N-BUTYL PHTHALATE  
DI-N-OCTYL PHTHALATE  
DIALLATE  
DIBENZO(A,H)ANTHRACENE  
DIBENZOFURAN  
DIETHYL PHTHALATE  
DIMETHOATE  
DIMETHYL PHTHALATE  
DIMETHYLAMINOAZOBENZENE  
DIPHENYLAMINE  
DISULFOTON  
ETHYL METHANESULFONATE  
FAMPHUR  
FLUORANTHENE  
FLUORENE  
HEXACHLOROBENZENE  
HEXACHLOROBUTADIENE  
HEXACHLOROCYCLOPENTADIENE  
HEXACHLOROETHANE  
HEXACHLOROPROPENE  
INDENO(1,2,3-CD)PYRENE  
ISODRIN  
ISOPHORONE  
ISOSAFROLE  
KEPONE  
METHAPYRILENE  
METHYL METHANESULFONATE  
METHYL PARATHION  
N-NITROSODI-N-BUTYLAMINE  
N-NITROSODI-N-PROPYLAMINE  
N-NITROSODIETHYLAMINE  
N-NITROSODIMETHYLAMINE  
N-NITROSODIPHENYLAMINE  
N-NITROSOMETHYLETHYLAMINE  
N-NITROSOPIPERIDINE  
N-NITROSOPYRROLIDINE  
NAPHTHALENE  
NITROBENZENE (NB)  
O,O,O-TRIETHYLPHOSPHOROTHIOATE  
O-TOLUIDINE  
PARATHION

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SOLID & HAZARDOUS WASTES

-----SEMI-VOLATILES-----

EPA 8270E (2018)  
EPA 3535A (2007)

PENTACHLOROBENZENE  
PENTACHLORONITROBENZENE  
PENTACHLOROPHENOL  
PHENACETIN  
PHENANTHRENE  
PHENOL  
PHORATE  
PRONAMIDE  
PYRENE  
SAFROLE  
THIONAZIN

EPA 8260D (2018)  
EPA 5030B (1996)

ACRYLONITRILE  
ALLYL CHLORIDE  
BENZENE  
BROMOBENZENE  
BROMOCHLOROMETHANE  
BROMODICHLOROMETHANE  
BROMOFORM  
BROMOMETHANE  
CARBON DISULFIDE  
CARBON TETRACHLORIDE  
CHLOROBENZENE  
CHLORODIBROMOMETHANE  
CHLOROETHANE  
CHLOROFORM  
CHLOROMETHANE  
CHLOROPRENE  
CIS-1,2-DICHLOROETHENE  
CIS-1,3-DICHLOROPROPENE  
DIBROMOMETHANE  
DICHLORODIFLUOROMETHANE  
ETHYL METHACRYLATE  
ETHYLBENZENE  
HEXACHLOROBUTADIENE  
IODOMETHANE  
ISOBUTYL ALCOHOL  
ISOPROPYLBENZENE  
METHACRYLONITRILE  
METHYL ETHYL KETONE (MEK)  
METHYL METHACRYLATE  
METHYL TERT BUTYL ETHER (MTBE)  
METHYLENE CHLORIDE  
N-BUTYLBENZENE  
N-PROPYLBENZENE  
NAPHTHALENE  
P-ISOPROPYLTOLUENE  
PROPIONITRILE  
SEC-BUTYLBENZENE  
STYRENE  
TERT-BUTYLBENZENE  
TETRACHLOROETHENE  
TOLUENE  
TRANS-1,2-DICHLOROETHENE  
TRANS-1,3-DICHLOROPROPENE  
TRANS-1,4-DICHLORO-2-BUTENE  
TRICHLOROETHENE

EPA 8260D (2018)  
EPA 5030B (1996)

TRICHLOROFLUOROMETHANE  
VINYL ACETATE  
VINYL CHLORIDE  
XYLENE, TOTAL

-----VOLATILES (VOCS)-----

EPA 8260D (2018)  
EPA 5030B (1996)

1,1,1,2-TETRACHLOROETHANE  
1,1,1-TRICHLOROETHANE  
1,1,2,2-TETRACHLOROETHANE  
1,1,2-TRICHLOROETHANE  
1,1-DICHLOROETHANE  
1,1-DICHLOROETHENE  
1,1-DICHLOROPROPENE  
1,2,3-TRICHLOROBENZENE  
1,2,3-TRICHLOROPROPANE  
1,2,4-TRICHLOROBENZENE  
1,2-DIBROMO-3-CHLOROPROPANE(DBCP)  
1,2-DICHLOROBENZENE  
1,2-DICHLOROETHANE  
1,2-DICHLOROPROPANE  
1,3-DICHLOROBENZENE  
1,3-DICHLOROPROPANE  
1,4-DICHLOROBENZENE  
2,2-DICHLOROPROPANE  
2-CHLOROETHYL VINYL ETHER  
2-CHLOROTOLUENE  
2-HEXANONE  
4-CHLOROTOLUENE  
4-METHYL-2-PENTANONE  
ACETONE  
ACETONITRILE  
ACROLEIN