



SC DEPARTMENT of
**ENVIRONMENTAL
SERVICES**

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. DES 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: April 21, 2025
Date of Expiration: January 31, 2026
Certificate Number: 89022001

Program Manager
Office of Environmental Laboratory Certification

**SOUTH CAROLINA DEPARTMENT OF ENVIRONMENTAL SERVICES
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 D1067-16
 EPA 300.0 (1993)
 SM 4500-H B-2021
 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-2021
 SM 4500-CN E-2021
 EPA 1664B (2010)
 SM 4500-S2 B-2021
 SM 4500-S2 D-2021

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-2020
 SM 2540 D-2020

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
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
ENDOSULFAN I

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

ENDOSULFAN II
ENDOSULFAN SULFATE
ENDRIN
ENDRIN ALDEHYDE
GAMMA-BHC (LINDANE)
HEPTACHLOR
HEPTACHLOR EPOXIDE
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

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
2,4,5-TRICHLOROPHENOL
2,4,6-TRICHLOROPHENOL
2,4-DICHLOROPHENOL

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

2,4-DIMETHYLPHENOL
2,4-DINITROPHENOL
2,4-DINITROTOLUENE (2,4-DNT)
2,6-DICHLOROPHENOL
2-ACETYLAMINOFLUORENE
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-AMINOBIIPHENYL
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
BIS(2-ETHYLHEXYL)PHTHALATE
BUTYL BENZYL PHTHALATE
CHLOROENZILATE
CHRYSENE

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

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
PENTACHLOROBENZENE
PENTACHLORONITROBENZENE
PENTACHLOROPHENOL
PHENACETIN

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SOLID & HAZARDOUS WASTES

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

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

PHENANTHRENE
PHENOL
PHORATE
PRONAMIDE
PYRENE
SAFROLE
THIONAZIN

-----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
ACRYLONITRILE
ALLYL CHLORIDE
BENZENE
BROMOBENZENE

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

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
TRICHLOROFLUOROMETHANE
VINYL ACETATE
VINYL CHLORIDE
XYLENE, TOTAL