



Accredited Laboratory

A2LA has accredited

EMSL ANALYTICAL, INC.

Cinnaminson, NJ

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2016 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Energy Consolidated Audit Program (DOECAP) as detailed in version 5.4 of the DoD Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 5th day of August 2022.

A blue ink signature of a person, likely the Vice President of Accreditation Services, written over a horizontal line.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2845.01
Valid to July 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ENVIRONMENTAL

Valid To: July 31, 2024

Certificate Number: 2845.01

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the laboratory’s compliance with the 2016 TNI Environmental Testing Laboratory Standard, the requirements of the Department of Energy Consolidated Audit Program (DOECAP) as detailed in version 5.4 of the DoD/DOE Quality Systems Manual for Environmental Laboratories), and for the test methods applicable to the National Lead Laboratory Accreditation Program (NLLAP), accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Test	Test Method(s)	Parameter/Analyte
Aromatic Hydrocarbons	NIOSH 1501 mod.	Benzene Ethylbenzene Toluene o-Xylene p-Xylene m-Xylene
Elements by ICP	NIOSH 7300 NIOSH 7300 mod. NIOSH 7303 NIOSH 7303 mod.	Aluminum (Al) Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Bismuth (Bi) Boron (B) Cadmium (Cd) Cerium (Ce) Chromium (Cr) Cobalt (Co) Copper (Cu) Iron (Fe) Lead (Pb) Lithium (Li) Magnesium (Mg) Manganese (Mn) Molybdenum (Mo) Nickel (Ni) Phosphorous (P) Potassium (K) Selenium (Se)



		Silver (Ag) Sodium (Na) Strontium (Sr) Sulfide (S) Thalium (Tl) Tin (Sn) Titanium (Ti) Vanadium (V) Zinc (Zn) Zircon (Zr)
Hexavalent Chromium	OSHA 215	Hexavalent Chromium
Inorganic Acids	NIOSH 7903	Flourine (F) Bromie (Br) Chlorine (Cl) Nitrate (NO ₃) Nitrite (NO ₂) Sulfate (SO ₄) Phosphate (PO ₄)
Mercury	NIOSH 6009 mod., OSHA 140 mod.	Mercury
Ozone	OSHA 214	Ozone
Polychlorinated Biphenyls	NIOSH 5503 mod.	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268
Silica, Crystalline	NIOSH 7500 mod., OSHA 142	a-quartz Cristobalite Trydimite
Total Metals	EMSL Analytical, Inc. LM-003 (Modified NIOSH 7300 for ICP/ICP-MS)	Beryllium Oxide (BeO) Beryllium (Be)

ASBESTOS ANALYSIS		
Test	Test Method(s)	Parameter/Analyte
Phase Contrast Microscopy	NIOSH 7400	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers



Polarized Light Microscopy	SAE J2975, EPA 600/R-93/116 NIOSH 9002 ASTM D7521-16	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Sample Preparation by Drilling	SAE J2975	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Transmission Electron Microscopy – Air	NIOSH 7402	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Transmission Electron Microscopy – Air	ISO 10312 (direct method)	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Transmission Electron Microscopy – Bulk	ISO 13794 (indirect method)	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Transmission Electron Microscopy – Surfaces	ASTM D6480-99 ASTM D5755-95	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers

Transmission Electron Microscopy – Soil	ASTM D7521-16	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers
Transmission Electron Microscopy	EPA 100.2	Asbestos: Chrysotile Asbestos: Amosite Asbestos: Crocidolite Asbestos: Anthophyllite Asbestos: Tremolite Asbestos: Actinolite Asbestos: Other non-regulated amphibole fibers

RADIOCHEMISTRY and CHEMISTRY DRINKING WATER, NON POTABLE, SOLID/CHEMICAL MATRIX	
Parameter/Analyte	Test Method(s)
Alpha Spectroscopy (Pu-238, Pu-239/240, U-235, U-234/238, Am-241, Th-230/232)	EMSL RC-SOP-007, EPA 907.0 mod.
Alpha/Beta Scan	EMSL RC-SOP-003, EPA 900 mod.
Gamma Scan	EMSL RC-SOP-002, EPA 901.1 mod.
Gross Alpha/Beta	EPA 900, EPA 900 mod.
Nickel (Ni-63)	EMSL RC-SOP-201
Radium (Ra-226)	EPA 903, EPA 903 mod.
Radium (Ra-228)	EPA 904, EPA 904 mod.
Strontium (Sr-89/-90)	EPA 905, EPA 905 mod.
Tritium	EPA 906, EPA 906 mod.
Total Organic Carbon in Water and Wastewater; Persulfate Oxidation Method SM 5310C	MS-SOP-R2

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on Children's Products: ⁽¹⁾

CHEMICAL	
Test	Test Method(s)
Lead in Paint and Surface Coatings	16 CFR 1303 (using ASTM E1613 and E1645); CPSC-CH-E1003-09.1
Phthalates	CPSC-CH-C1001-09.4 (using EPA SW-846 8270)
Soluble Heavy Metals Content (As, Ba, Cd, Cr, Pb, Hg, Sb, Se)	ASTM F 963-17 Section 4.3.5.1 & Section 4.3.5.2 (EMSL Analytical, Inc. LM-032)
Total Cadmium in Children's Metal Products Including Children's Metal Jewelry	EMSL Analytical, Inc. LM-016, (Modified CPSC-CH-E1001-08.1)

Total Cadmium in Children's Non-Metal Products	EMSL Analytical, Inc. LM-016, (Modified CPSC-CH-E1002-08)
Total Lead in Children's Metal Jewelry	CPSC-CH-E1001-08.1
Total Lead in Children's Metal Products	CPSC-CH-E1001-08.1
Total Lead in Children's Non-Metal Products	CPSC-CH-E1002-08

¹ The Consumer Product Safety Improvement Act (CPSIA) requires that every children's product subject to a federal consumer product safety requirement be tested by a Consumer Product Safety Commission (CPSC) accepted laboratory for compliance with the applicable federal children's product safety requirements. Accreditation by A2LA does not infer acceptance by the CPSC. Please verify this organization's acceptance status by using the CPSC's searchable database, located at <http://www.cpsc.gov/cgi-bin/labsearch/>.

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AIR MATRIX		
Combustion-by-Products (Black Carbon/Soot, Char, and Ash)	ASTM D6602	Black Carbon/Soot Char Ash
Diesel Particulate Matter (As Elemental Carbon)	NIOSH 5040	Elemental Carbon
Inorganic Fibrous Particles by SEM method	German VDI 3492	Fibrous Glass Mineral Wool Refractory Ceramic Fibers Asbestos
Inorganic Fibrous Particles by SEM method	ISO 14966	Fibrous Glass Mineral Wool Refractory Ceramic Fibers Asbestos

POTABLE, NON-POTABLE, SOLIDS/SOILS MATRIX

Test	Test Method(s)	Parameter/Analyte
PFAS	EPA 537.1 EPA 537 EPA 533	11Cl-PF3OUdS 9CL-PF3ONS ADONA HFPO-DA PFNS PFBA PFDS N-MeFOSAA N-EtFOSAA PFBS 8:2 FTS PFDA PFDoA PFOSA PFHpA 4:2 FTS PFHxS PFHxA PFTrDA PFTeDA PFNA 6:2 FTS PFOS PFOA PFPeA PFPeS PFUnA

PFAS	Draft Method EPA 1633	11Cl-PF3OUdS 9CL-PF3ONS PFEESA ADONA HFPO-DA PFMPA PFMBA NFDHA PFNS PFBA PFDS N-MeFOSAA N-EtFOSAA PFBS 8:2 FTS PFDA PFDoA PFOSA PFHpA 4:2 FTS PFHxS PFHxA PFTrDA PFTeDA PFNA 6:2 FTS PFOS PFOA PFPeA PFUnA PFPeS PFHpS PFDoS NMeFOSA NEtFOSA NMeFOSE NEtFOSE 3:3FTCA 5:3FTCA 7:3FTCA
Lead	EPA 7420/7000B	Lead

Metals	SW 846 6010D SW 846 6020B	Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Phosphorus Potassium Selenium Silver Sodium Strontium Thallium Tin Titanium Vanadium Zinc Zirconium
Mercury	SW 846 7470B (NPW) SW 846 7471A (SCN)	Mercury
PCB's	SW 846 8082A	PCB 1016 PCB 1221 PCB 1232 PCB 1242 PCB 1248 PCB 1254 PCB 1260 PCB 1262 PCB 1268
SOIL/SOLIDS/BULK MATRIX*		
Test	Test Method(s)	Parameter/Analyte
Combustion-by-Products (black carbon/soot, char and ash)	ASTM D6602	Black Carbon/Soot Char Ash

Determination of Asbestos in Technical Products by SEM method	German VDI 3866 Part 5	Asbestos
Separatory Funnel Liquid/Liquid Extractions	EPA 3510C	-----
Microwave Sample Preparation	EPA 3546	-----
Polychlorinated Biphenyls (PCBs)	EPA 8082A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268
Silica Gel Cleanup	EPA 3630C	-----
Soxhlet Sample Preparation	EPA 3540C	-----
Sulfur Extract Cleanup	EPA 3660B	-----
Sulfuric Acid Cleanup	EPA 3665A	-----
Waste Dilution Sample Preparation	EPA 3580A	-----

Test	Test Method(s)	Parameter/Analyte
Pesticides	SW 846 8081B	Aldrin Alpha BHC Beta BHC Chlordane (alpha) (cis-) Chlordane (gamma) (trans-) DDD (4,4'-) DDE (4,4'-) DDT (4,4'-) Delta BHC Dieldrin Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde Endrin ketone Heptachlor Heptachlor epoxide Lindane (gamma BHC) Methoxychlor Mirex Toxaphene
Test	Test Method(s)	Parameter/Analyte

Semi-Volatiles	SW 846 8270E	Acenaphthene Acenaphthylene Acetophenone Acetylaminofluorene (2-) Aminobiphenyl (4-) Aniline Anthracene Aramite Atrazine Benzaldehyde Benzidine Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(ghi)perylene Benzo(k)fluoranthene Benzoic acid Benzyl alcohol Biphenyl (1,1'-) Bis (2-chloroethoxy) methane Bis (2-chloroethyl) ether Bis(2-chloroisopropyl)ether 2,2'-oxybis(1-chloropropane) Bis (2-ethylhexyl) phthalate Bromophenyl-phenyl ether (4-) Butylbenzylphthalate Caprolactam
Semi-Volatiles (cont)	SW 846 8270E	Carbazole Chloroaniline (4-) Chlorobenzilate Chloronaphthalene (1-) Chloronaphthalene (2-) Chlorophenol (2-) Chlorophenyl-phenyl ether (4-) Chrysene Decane (n-) Diallate (cis) Diallate (trans) Dibenzo(a,h)anthracene Dibenzofuran Dichlorobenzene (1,2-) Dichlorobenzene (1,3-) Dichlorobenzene (1,4-) Dichlorobenzidine (3,3'-) Dichlorophenol (2,4-) Dichlorophenol (2,6-) Diethyl phthalate Dimethoate Dimethyl benzidine (3,3-) Dimethyl phthalate Dimethylamin oazobenzene



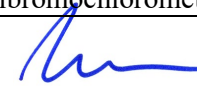
		Dimethylbenz(a)anthracene (7,12-) Dimethylphenol (2,4-) Di-n-butyl phthalate Dinitrobenzene (1,3-) Dinitrophenol (2,4-) Dinitrophenol (2-methyl-4,6-) Dinitrotoluene (2,4-) Dinitrotoluene (2,6-) Di-n-octyl phthalate Dinoseb Dioxane (1,4-) Diphenylhydrazine / Azobenzene Disulfoton Famphur Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene (1,3-) Hexachlorocyclopentadiene Hexachloroethane Hexachlorophene Hexachloropropene Indeno(1,2,3-cd)pyrene
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Test	Test Method(s)	Parameter/Analyte
Semi-Volatiles (cont)	SW 846 8270E	Isodrin Isophorone Isosafrole (cis-) Isosafrole (trans-) Kepone Methanesulfonate (Ethyl-) Methanesulfonate (Methyl-) Methapyrilene Methyl phenol (4-chloro-3-) Methylcholanthrene (3-) Methylnaphthalene(1-) Methylnaphthalene (2-) Methylphenol (2-) Methylphenol (3-) Methylphenol (4-) Naphthalene Napthoquinone (1,4-) Napththylamine(1-) Napththylamine (2-) Nitroaniline (2-) Nitroaniline (3-) Nitroaniline (4-) Nitrobenzene Nitrophenol (2-)

		<p>Nitrophenol (4-) N-Nitrosodiethylamine N-Nitrosodimethylamine N-Nitroso-di-n-butylamine N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine / Diphenylamine N-Nitrosomethylethylamine N-Nitrosomorpholine N-Nitrosopiperidine N-Nitrosopyrrolidine Octadecane (n-) Parathion Parathion methyl Pentachlorobenzene Pentachloroethane Pentachloronitrobenzene Phenylethylamine (alpha,alpha-Dimethyl) Phorate Phosphorothioate (O,O,O-triethyl) Phosphorothioate (diethyl-O-2-pyrazinyl) [Thionazin] Picoline (2-)</p>
Semi-Volatiles (cont)	SW 846 8270E	<p>Pronamide Pyrene Pyridine Quinoline -1-Oxide (4-Nitro) Safrole Sulfotepp Tetrachlorobenzene (1,2,4,5-) Tetrachlorophenol (2,3,4,6-) Toluidine (2-) (2-Methylaniline) Toluidine (5-nitro-2-) Trichlorobenzene (1,2,4-) Trichlorophenol (2,4,5-) Trichlorophenol (2,4,6-) Trinitrobenzene (1,3,5-) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(ghi)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Dimethylbenz(a)anthracene (7,12-)</p>



		Dinitrophenol (2-methyl-4,6-) Dioxane (1,4-) Fluorene Hexachlorobenzene Hexachlorobutadiene (1,3-) Indeno(1,2,3-cd)pyrene Methylcholanthrene (3-) Methylnaphthalene (1-) Methylnaphthalene (2-) Naphthalene N-Nitrosodimethylamine Pentachlorophenol Phenanthrene Pyrene Diethylene glycol Diesel Range Organics (DRO) Ethyl alcohol Ethylene glycol Ethylene Oxide Gasoline Range Organic Methyl alcohol (Methanol) Propylene glycol Triethylene glycol
Volatiles	SW 846 8260D	Acetone Acetonitrile Acrolein Acrylonitrile Allyl chloride Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Butadiene (2-chloro-1,3-) Butanone (2-) (Methyl ethyl ketone) Butylbenzene (n-) Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroethyl vinyl ether (2-) Chloroform Chloromethane Chlorotoluene (2-) Chlorotoluene (4-) Cyclohexane Cyclohexanone Dibromo-3-chloropropane (1,2-) Dibromochloromethane



		Dibromoethane (1,2-) (EDB) Dibromomethane Dichloro-2-butene (trans-1,4-) Dichlorobenzene (1,2-) Dichlorobenzene (1,3-) Dichlorobenzene (1,4-) Dichlorodiuoromethane Dichloroethane (1,1-) Dichloroethane (1,2-) Dichloroethene (1,1-) Dichloroethene(cis-1,2-) Dichloroethene (trans-1,2-) Dichloropropane (1,2-) Dichloropropane (1,3-) Dichloropropane (2,2-) Dichloropropene (1,1-) Dichloropropene (cis-1,3-) Dichloropropene (trans-1,3-) Diethyl ether (Ethyl ether) Dioxane (1,4-) Ethyl acetate
Volatiles (cont)	SW 846 8260D	Ethyl methacrylate Ethylbenzene Ethyl-tert-butyl Ether (ETBE) Heptane (n-) Hexachlorobutadiene (1,3-) Hexachloroethane Hexane (n-) Hexanone (2-) Isa-butyl alcohol Isopropanol Isopropylbenzene Isopropyltoluene (4-) Methylcrolonitrile Methyl acetate Methyl acrlate Methyl iodide Methyl methacrylate Methyl tert-butyl ether Methylcyclohexane Methylene chloride (Dichloromethane) Naphthalene Nitrobenzene Nitropropane (2-) Pentachloroethane Pentanone (4-methyl-2-) (MIBK) Propionitrile Propylbenzene (n-) Sec-butylbenzene Styrene



		tert-Amylmethyl ether (TAME) Tert-butyl alcohol Tert-butylbenzene Tetrachloroethane (1,1,1,2-) Tetrachloroethane (1,1,2,2-) Tetrachloroethene Tetrahydrofuran Toluene Trichloro (1,1,2-) trinuoroethane (1,2,2-) Trichlorobenzene (1,2,3-) Trichlorobenzene (1,2,4-) Trichloroethane (1,1,1-) Trichloroethane (1,1,2-) Trichloroethene Trichlorofluoromethane Trichloropropane (1,2,3-) Trimethylbenzene (1,2,4-)
Volatiles (cont)	SW 846 8260D	Trimethylbenzene (1,3,5-) Vinyl acetate Vinyl chloride Xylene (m-) Xylene (o-) Xylene (p-) Xylenes (total)
Wet Extraction Test (WET) – Soluble Threshold Limit Concentration/Total Threshold Control Limit (STLC-TTLC)	California Code of Regulations, Title 22, Chapter 11, Article 5 Appendix II	-----

