

Environmental Services Laboratory

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LAB CAPABILITIES LIST, 2018

Energy Northwest Environmental Services laboratory has provided a wide range of environmental monitoring and analytical services to individual, municipal, commercial and utility customers since 1992. The team provides the highest quality chemical analysis, ecological monitoring assessment, and environmental & radiochemical analysis.

Energy Northwest's Environmental Services team is qualified and experienced; clients routinely call on us to help solve the most difficult analytical problems as well as handle routine needs.

The laboratory maintains accreditation for wastewater, drinking water, radiochemical analyses, and licensure as a clinical laboratory for drug screening.

Sample Turn Around

Standard turn-around times for analytical results are normally from 10 to 15 working days. Completion times for samples vary according to the number and nature of the tests required. Priority turn-around times can be provided for most tests. Energy Northwest Environmental Services Laboratory does not guarantee a set turn-around time to anyone except those who are paying additional rush fees. Samples to be analyzed for more than one contaminant will have the turn-around time associated with the longest analysis. It is not our policy to write partial reports. Contact the laboratory for priority availability and pricing.

Rush Charges

Energy Northwest Environmental Services Laboratory must be notified of and approve all rush order requests prior to receiving samples. Without prior approval, we cannot guarantee turn-around times. Although Energy Northwest Environmental Services Laboratory meets most rush requests, should a guaranteed time be missed, there will be no rush fees charged. Please call for availability and pricing before shipping rush samples. Rush projects are reported by 5 pm on the day requested and will be billed at the following rates:

10-15 Days	Listed Price
6-9 Days	Add 25%
5 Day	Add 35%
4 Day	Add 50%
3 Day	Add 60%
2 Day*	Add 75%
Next Day*	Add 100%
Same Day*	Add 200%

*\$100 minimum fee for rush analysis of 2-days or less.

Administrative Fee

New customers may be subject to a one time administrative fee of \$20.00. Additional fees may be applicable for non-routine sample preparations. Level III or IV reports are available at an additional charge.



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Environmental & Analytical Services

Drinking Water Analyses

BACTERIOLOGICAL

Parameter	Analytical Method
Coliform (Presence/Absence)	MMO-MUG
Coliform, Fecal	SM 9221 B, C, E1
Coliform, Total	SM 9221 B, C, E1

DISINFECTION BY-PRODUCTS

Parameter	Analytical Method
Haloacetic Acids (HAA5)	SM 6251B, EPA 552.2
Organic Carbon, Total	SM 5310B
Total Trihalomethanes (TTHM)	EPA 524.2, 524.3
TTHM & HAA5	EPA 524.3 & SM 6251B EPA 524.2 & EPA552.2

PRIVATE HOUSEHOLD TESTING PACKAGES

Parameter	Analytical Method
Arsenic	EPA 200.8
Arsenic & Coliform (Presence/Absence)	EPA 200.8/MMO-MUG
Coliform (Presence/Absence), Nitrates, Arsenic	Various
Coliform (Presence/Absence) & Nitrates	Various
Lead & Copper, Coliform (Presence/Absence)	EPA 200.8/MMO-MUG
Lead & Copper	EPA 200.8

INORGANIC CONTAMINANTS

Parameter	Analytical Method
Anions: Single Anion	EPA 300.0
Each Additional Anion: (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Sulfate)	
Alkalinity	SM 2320B/EPA 310.1
Ammonia	SM 4500 NH3
Asbestos	EPA 100.2
Chlorine, Total Residual	SM 4500CI-G
Color	SM 2120B
Conductivity	SM 2510A/EPA 120.1
Cyanide, Total	SM4500CN- E
Dissolved Oxygen	SM4500O
Hardness	SM 2340B/EPA 200.8
Hexavalent Chromium	EPA 218.6
Hydrogen Sulfide	SM 4500-S ²⁻ F
Mercury: CVAA	EPA 245.7



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Mercury, Low Level	EPA 1631E
Metals/Cations: Single Metal/Cation	EPA 200.8/EPA 200.7
Each Additional Metal or Cation: (Al, Sb, As, Ba, Be, B, Cd, Ca, Cs, Cr, Co, Cu, Au, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, P, Pt, K, Se, Si, Ag, Na, S, Sr, Tl, Sn, Ti, U, V, Y, Zn, Zr)	
pH	SM 4500H/EPA 150.1
Total Dissolved Solids	SM 2540C/EPA 160.1
Turbidity	SM 2130B/EPA 180.1
Volatile Suspended Solids	SM 2540E
Drinking Water Packages	
Lead & Copper	EPA 200.8
Nitrate/Nitrite (Nitrates)	EPA 300.0
Washington Complete IOC	Various

ORGANIC COMPOUNDS

Parameter	Analytical Method
Semivolatile Organics- WA List	EPA 525.2/EPA 505
EDB/DBCP	EPA 504.1
Chlorinated Pesticides/PCB's	EPA 505
Herbicides Regulated & Unregulated	EPA 515.4
Carbamates Regulated & Unregulated	EPA 531
Volatile Organics	EPA 524.2

Waste Water Analyses

BACTERIOLOGICAL

Parameter	Analytical Method
Biological Oxygen Demand	SM 5210B
Chemical Oxygen Demand	EPA 410.4
Coliform (Presence/Absence)	MMO-MUG

INORGANIC CONTAMINANTS

Parameter	Analytical Method
Anions: Single Anion	EPA 300.0
Each Additional Anion: (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Ortho-Phosphate, Total-Phosphate, Sulfate)	
Alkalinity, Total	SM 2320B
Each Additional	
Carbonate, Bicarbonate, Hydroxide	
Ammonia	SM 4500NH3



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Parameter	Analytical Method
Asbestos	EPA 100.1
Chromium, Hexavalent	SM 3500Cr
Conductivity	SM 2510B
Cyanide, Total	EPA 335.4
Dissolved Oxygen	SM5210B
Fats, Oil, & Grease (HEM), Total	EPA 1664
Hardness	EPA 130.2/SM 2340B
Hydrogen Sulfide	SM 4500 S
Mercury: CVAA	EPA 245.7/SM 7471A
Mercury, Low Level	EPA 1631E
Metals/Cations: Single Metal/Cation	EPA 200.8/EPA 200.7
Each Additional Metal or Cation: (Al, Sb, As, Ba, Be, B, Cd, Ca, Cs, Cr, Co, Cu, Au, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, P, Pt, K, Se, Si, Ag, Na, S, Sr, Tl, Sn, Ti, U, V, Y, Zn, Zr)	
Priority Pollutant Metals: (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	EPA 200.8/6020
Nitrate/Nitrites (Nitrates)	EPA 300.0
Nitrogen, Total (NO ₂ + NO ₃ + TKN)	Various
Nitrogen, Total Kjeldahl	SM 4500NH3/SM 4500NB
NWTPH-Dx	NWTPH-Dx
NWTPH-Gx	NWTPH-Gx
Organic Carbon, Total	SM 5310B/SM 5310C
Organic Halogens, Total (TOX)	EPA 9023
Particle Count and Size	SALI
pH	SM 4500H
Phosphorus, Orthophosphate	SM 4500PE
Phosphorus, Total	SM 4500PE
Reactive Sulfides (solids/liquids)	SW 846 CH7
Total Dissolved Solids	SM 2540C
Total Suspended Solids	SM 2540D
Turbidity	SM 2130B
Volatile Suspended Solids	SM 2540E

ORGANIC COMPOUNDS

Parameter	Analytical Method
Carbamate Pesticides	EPA 8318
EDB	EPA 8011
Organochlorine Pesticides	EPA 8081A/EPA 8270D
Organophosphorus Pesticides	EPA 8141A/EPA 8270D
PCB's	EPA 8082
Phenols	EPA 8270D
Semivolatile Organics	EPA 8270D
Volatile Organics	EPA 8260C
BTEX, PERC (Tetrachloroethene) & Benzene	EPA 8260C



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Soil Analyses

Many of the Waste Water parameters are also available for soil. Please call to inquire about these capabilities

Hazardous Waste Analyses

Parameter	Analytical Method
TCLP	
Extraction	EPA 1311
Single Metal/Cation	EPA 6020/ EPA 1311
RCRA 8 Metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se)	EPA 6020/EPA 1311
Volatiles	EPA 8260C/EPA 1311
Semivolatiles	EPA 8270D/EPA 1311
Benzene	EPA 8260C
Cresol	EPA 8270D
BTU (Heat of Combustion)	ASTM D240-92
Pesticides	EPA 8081A/EPA 1311
Herbicides	EPA 8151A/EPA 1311
Full List *	Various

*Includes RCRA 8 Metals, Volatiles, Semivolatiles, Pesticides, and Herbicides.

Lubricant and Oil Analyses

Parameter	Analytical Method
Crackle	SALI
Direct Reading Ferrography	SALI
Flash Point (Pensky Martens)	ASTM D-93
Membrane Patch Colorimetry	SALI
Oxidation/Condition by FTIR	SALI
Particle Count	SALI
Remaining Useful Life (RULER)	ASTM D-6971
Total Acid or Base Number	Titra-Lube
Viscosity, Brookfield	ASTM D-445
Viscosity, Kinematic	ASTM D-445
Water by Karl Fisher	ASTM E-1064
Wear Metals (21) by ICP-OED	SALI



Material Quality Assurances

Parameter	Analytical Method
Anions (6) by Ion Chromatography	EPA 9056
Complete Analysis with QC	Various
Embrittling Metals (11) by ICP-MS	SW 846 6020
Polymer Composition by FTIR	SALI
Preparation by Oxygen Bomb or Leach	SALI
Low Melting Point Metals	SW 846 6020

Cooling System Analyses

Parameter	Analytical Method
Acid Producers	SALI
Additives	Various
Aerobic Plate Counts	SALI
Anaerobic Bacteria	SALI
ATP	SALI
Corrosion Coupons	SALI
Metal Oxidizing Bacteria Presence/Absence	SALI
Nitrate Reducing Bacteria	SALI
Slime Producers (Pseudomonas)	SALI
Sulfate Reducing Bacteria	SALI

Radiological Analyses

Parameter	Analytical Method
Gamma Isotopic Analysis	SM 7120B
Gross Alpha	SM 7110B/EPA 900.0
Gross Beta	SM 7110B/EPA 900.0
Gross Alpha/Beta	SM 7110B/EPA 900.0
I-131	SM 7500I
Radium-228	EPA 904.0
Tritium	SM 7500 ³ H B
Uranium, Natural	EPA 200.8
Radium-226	EPA 903.1



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Additional Information

Analytical Methods

ASTM: American Society for Testing and Materials *ASTM Standards*
EPA: Environmental Protection Agency *Methods and Guidance for Analysis of Water*
NWTPH: Washington State Department of Ecology methods
SALI: Energy Northwest *Supplemental Analytical Laboratory Instructions*
SM: *Standard Methods for the Examination of Water and Wastewater*
SW 846: Environmental Protection Agency *Test Methods for Evaluating Solid Waste Physical/Chemical Methods*

The methods listed are those most commonly used, selected to conform to regulatory requirements and accepted scientific practices. An individual sample may contain materials interfering with a specific method listed above and preventing determination of the tested parameter. In these cases, with approval of our customers our analysts can usually provide accurate results using an alternate method. Any alternate methods used will be listed on the sample report.

Subcontracted Analyses

The Energy Northwest Environmental Services Laboratory offers sample tracking, shipping, results reporting and invoicing for several analyses that are not cost-effective to perform in our facility. Only cooperating laboratories with appropriate accreditations are used, and they have been selected based on both price and quality of service. In periods of unusually high sample loads or instrumentation difficulties, our cooperating laboratories also may perform some analyses we usually provide.

Additional Capabilities

Along with the listed chemical tests, we offer other specialized services. Environmental sampling, identification of unknowns, analysis of non-standard chemicals or matrices, thermal testing, individual agricultural chemicals and analytical method development are some of the available services. Call to request a quote for any of your requirements not included in this price list.

Note on our commitment to the environment

Energy Northwest is committed to protecting the environment for current and future generations. As part of that commitment, we have developed, implemented, and maintain a comprehensive Environmental Management System (EMS). Our EMS was designed to meet the rigorous requirements of the globally recognized International Organization for Standardization (ISO) 14001 standard with additional emphasis on compliance, pollution prevention, and communication.



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