



**Conseil
canadien
des
normes**

Standards Council of Canada

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SCOPE OF ACCREDITATION

**Exova Canada Inc.
FORT ST. JOHN LABORATORY
#1 8822- 100th Street
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Accredited Laboratory No. 604
(Conforms with requirements of CAN-P-1585, ISO/IEC 17025:2005)

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CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Chemical/Physical

PROGRAM SPECIALTY AREA: Environmental

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ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

Soil

Soil (Organic)

(Barium -Soil)

B.C. Environmental Lab Manual, Section C: Metals TM DW 007-93 Soluble Barium by Calcium Chloride Extraction (Prescriptive) (TM DW 007-93) Soluble Barium Barium in Soil by ICP-MS (Alberta Environment Soil Remediation Guidelines for Barite Modified) Extractable Barium

(Organic Matter by Loss of Ignition)

TM AG 002-93 Organic Matter in Soil by Loss on Ignition (MSS Method 3.8 Modified) % Organic Matter

Soil/Sediment

(BTEX/TPH - Soil)

TM LAND 015-93 BTEX in Soil Samples by GC FID/MSD(EPA 5021A/8260C Modified) Benzene Ethylbenzene m/p-xylene o-xylene

Toluene

(BTEX/VPH - Soil)

TM ORG 001-93

BTEX/VPH in Soil & Water by GC FID/MSD (B.C. Environmental Lab Manual, Monocyclic Aromatic Hydrocarbons /Volatile Hydrocarbons in Solids Modified)

Benzene

Ethylbenzene

m/p - Xylene

Methyl tert butyl ether (MTBE)

O - Xylene

Styrene

Toluene

Volatile Hydrocarbons (C6-C10)

Volatile Petroleum Hydrocarbons (C6-C10 - BTEX)

(Extractable Petroleum Hydrocarbons-Soil)

TM TEH 001-93

Extractable Petroleum Hydrocarbons in Soil and Water by GC FID (BC Environmental Lab Manual, Extractable Petroleum Hydrocarbons in Solids Modified)

EPH 10-19

EPH 19-32

(Metals - Soil)

B.C. Environmental Lab Manual, Section C: Metals

Strong Acid Leachable Metals (SALM) in Soil – Prescriptive (TM MET 001-93)

Antimony

Arsenic

Barium

Beryllium

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Manganese

Mercury

Molybdenum

Nickel

Selenium

Silver

Strontium
Thallium
Tin
Uranium
Vanadium
Zinc

B.C. Environmental Lab
Manual, Section C: Metals

Boron, Hot Water Soluble (Prescriptive) (TM MET 001-93)

TM LAND 005-93
(Suspended)

Boron
Mercury by Cold Vapour UV (APHA 3112B, BCMOE Mercury
(Atomic Absorption - Cold Vapour) Modified)
Mercury

(Particle Size Analysis - Solids)

TM AG 003-93

Particle Size Analysis of Soil by Hydrometer (SSMA 55.3
Modified)
Clay
Sand
Silt

TM AG 005-93

Particle Size Analysis by Wet Sieve (ASTM C117-04 Modified)
% Retained 75 m sieve

(pH - Soil)

TM AG 004-93

pH in Soil by 0.01M Calcium Chloride (MSS 3.11 Modified)
pH

(Polycyclic Aromatic Hydrocarbons (PAH) - Soil)

TM ORG 002-93

Polycyclic Aromatic Hydrocarbons in Soil and Water by GC MSD
(B.C. Environmental Lab Manual, PAH Solids Modified)
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Fluoranthene
Fluorene
Indeno (1,2,3-cd) pyrene

Napthalene
Phenanthrene
Pyrene

Waste

(Bulk Density - Waste and Soil)

TM DW 001-93 Bulk Density and Specific Gravity in Drilling Waste and Soil
(American Society of Agronomy No.9. Method 13-2, AER
Directive 050 and SSMA 57.1 Modified)
Bulk Density
Specific Gravity

(Flash Point - Waste)

TM LAND 007-93 Flash Point in Liquid and Soil by Pensky-Martens Closed Cup
Tester (ASTM D93 Modified)
Flash Point

(Free Liquids - Waste)

TM LAND 009-93 Paint Filter Test (EPA 9095B Modified)
Free Liquids - Waste

(Leachable BTEX - Waste)

EPA 1311 Toxicity Characteristic Leaching Procedure
Benzene

Ethylbenzene

m/p-xylene

o-xylene

TM LAND 001-93 Toluene
Leachable BTEX in Solids and Waste by GC FID/MSD (EPA
1311, 5021A/8260C Modified)
Benzene
Ethylbenzene
m/p-xylene
o-xylene
Toluene

(Leachate - Waste)

TM LAND 002-93	Cyanide in Soil and Solid Waste Extract By Spectrophotometry (HACH Method 8027 Cyanide: Pyridine-Pyrazalone Method Modified), Colorimetric analysis Cyanide
TM LAND 003-93	Fluoride in Soil and Solid Waste Extract (APHA 4500-F- C Ion-Selective Electrode Method Modified), Selective ion electrode analysis Fluoride
TM LAND 004-93	Nitrate + Nitrite in Drilling Waste and Solid Waste Extract by Spectrophotometry (HACH Method 10020/ 8153 Modified) (also for Salinity Analysis) Nitrate + Nitrite
TM LAND 005-93 (Suspended)	Mercury by Cold Vapour UV (APHA 3112 B Metals by Cold-Vapor Atomic Absorption Spectrometry, BCMOE Mercury (Atomic Absorption - Cold Vapour) Modified), Cold vapour UV analysis Mercury

(Microtox - Waste)

TM DW 003-93	Microtox -15 Minute Multiple Concentration Acute, Static (EPS1/RM/24, G50 Toxicity Protocols Appendix 4, BCMOE Microtox Photobacteria Bioassay, Solid Phase Microtox Photobacteria Bioassay Modified) Microtox EC 50 (15min)
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(pH - Waste and Soil)

TM LAND 010-93	pH and Electrical Conductivity in Water and Soil (MSS 4.12 Modified) EC pH
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(Salinity - Waste and Soil)

TM DW 004-93	Salinity, pH and EC in Water and in Soil & Waste by Saturated Paste (SSMA Ch 15 Modified) % Saturation Calcium EC Magnesium pH Potassium SAR Sodium Sulfate
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TM DW 005-93 Chloride in Aqueous Samples by Spectrophotometry (APHA 4500-Cl E. Modified)
Chloride

TM DW 008-93 Soluble Ammonia-N in Aqueous Extracts by Spectrophotometry (HACH 10031 Nitrogen, Ammonia Salicylate Method Modified)
Ammonium

(Special Waste Oil & Grease - Waste)

TM LAND 011-93 Special Waste Oil Determination by Petroleum Ether Extraction (Special Waste Regulations Act, BCMOE Determination of Waste Oil Content Modified)
Oil and Grease Dried Basis

Oil As Received

(SWEP Modified Leachate -Waste)

TM LAND 012-93 Metals by ICP-MS as prepared by SWEP (Modified SWEP) (Special Waste Regulation, Reg 63/88, Modified Leachate Extraction Procedure Modified, APHA 3120 B Modified), ICP analysis
Arsenic
Barium
Boron
Cadmium
Chromium
Copper
Lead
Mercury
Selenium
Silver
Uranium
Zinc

(TCLP Leachate - Waste)

EPA 1311 Toxicity Characteristic Leaching Procedure
Antimony

Arsenic

Barium

Beryllium

Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Uranium
Vanadium
Zinc

TM LAND 013-93

Zirconium
Metals by ICP-MS as prepared by TCLP in Liquid, Solid and
Waste Samples (EPA 1311 Toxicity Characteristic Leachate
Procedure Modified), ICP analysis
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Mercury
Nickel
Selenium

Silver
Thallium
Uranium
Vanadium
Zinc
Zirconium

Water (Inorganic)

(ph - Water)

TM LAND 010-93 pH and Electrical Conductivity in Water and Soil (APHA 4500-H⁺
B, APHA 2510 B Modified)
EC

pH

(Salinity - Water)

TM DW 004-93 Salinity, pH and EC in Water and in Soil & Waste by Saturated
Paste (SSMA Ch 15 Modified)
% Saturation
Calcium
EC
Magnesium
pH
Potassium
SAR
Sodium
Sulfate

Water (Organic)

(Extractable Petroleum Hydrocarbons - Water)

TM TEH001-93 Extractable Petroleum Hydrocarbons in Soil and Water by GC FID
(BC Environmental Lab Manual, Extractable Petroleum
Hydrocarbons in Water Modified)
EPH 10-19
EPH 19-32

(Petroleum Hydrocarbon (PHC/BTEX) - Water)

TM ORG 001-93 BTEX/VPH in Soil & Water by GC FID/MSD (B.C.
Environmental Lab Manual, Monocyclic Aromatic Hydrocarbons
/Volatile Hydrocarbons in Water, Modified)

Benzene
Ethylbenzene
m/p - Xylene
Methyl tert butyl Ether (MTBE)
o - Xylene
Styrene
Toluene
Volatile Hydrocarbons (C6-C10)
Volatile Petroleum Hydrocarbons (C6-C10 - BTEX)

(Polycyclic Hydrocarbons (PAH) - Water)

TM ORG 002-93 Polycyclic Aromatic Hydrocarbons in Soil and Water by GC MS
(B.C. Environmental Lab Manual, PAH in Water, Modified)

Acenaphthalene
Acenaphthylene
Acridine
Anthracene
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Fluoranthene
Fluorene
Indeno (1,2,3 - cd) pyrene
Naphthalene
Phenanthrene
Pyrene
Quinoline

Notes:

ASTM: American Society of Testing and Materials
ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration Laboratories
RG-LAB: SCC Requirements and Guidance for the Accreditation of Testing Laboratories
TM XXXX #: Exova in-house Test Methods.
MSA: Methods of Soil Analysis, SSSA Book Series no. 5, 1996
MSS: Manual on Soil Sampling and Methods of Analysis - J.A. McKeague, 1978
SSMA: Soil Sampling and Methods of Analysis, Martin R. Carter, 2008
EPA: Environmental Protection Agency
BCMOE: British Columbia Ministry of Environment
EPS: Environmental Protection Series

APHA: American Public Health Association
AER: Alberta Energy Regulator

Elias Rafoul, Vice President
Accreditation Services

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