Standards Council of Canada

600-55 Metcalfe Street Ottawa, ON K1P 6L5 Canada

Conseil canadien des normes

55, rue Metcalfe, bureau 600 Ottawa, ON K1P 6L5 Canada

SCOPE OF ACCREDITATION

Exova Canada Inc. EDMONTON LABORATORY 7217 Roper Road Edmonton, AB T6B 3J4

Accredited Laboratory No. 18 (Conforms with requirements of CAN-P-1585, CAN-P-4E (ISO/IEC 17025:2005))

CONTACT: TEL: FAX: EMAIL: URL:	Sara Montgomery +1 780 438 5522 +1 780 434 8586 Sara.Montgomery@Exova.com http://www.exova.com/
CLIENTS SERVED:	All interested parties
FIELDS OF TESTING:	Chemical/Physical
PROGRAM SPECIALTY AREA:	Environmental
SCOPE ISSUED ON:	2016-09-06
ACCREDITATION	2018-06-07

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

VALID TO:

Soil/Sediment

(Acid Neutralizing Value - Soil)

Standards Council of Canada

TM SOIL 024-10;	Acid Neutralizing Value for Liming Materials (AOAC 955.01 Modified)
	Calcium Carbonate Equivalent
(Atterberg Limits - Soil)	
TM SOIL 050-10;	Atterberg Limits of Soils (ASTM D4318-05 Modified) Atterberg Limits
(Available Cu/Fe/Mn/Zn - Soil)	
TM METAL 073-10;	Extractable Micro Nutrients in Soil by ICP (MSS Method 4.65/APHA 3120B Modified) Copper Iron Manganese Zinc
(Barium Fusion)	
TM METAL 060-10;	Barium in Soil by ICP (ASTM D4503-08/APHA 3120B Modified) Barium Fusion
(Boron - Soil)	
TM METAL 059-10;	Hot Water Soluble Boron in Soil by ICP (MSS Method 4.61/APHA 3120B Modified) Boron
(BTEX - Soil)	
TM ORG 001-10;	Analysis of BTEX/F1 in Soil and Water Samples GC/MSD + FID (SW 846, EPA 5021A/8260B Method A108.0-1/CCME-CWS-PHCS-TIER 1Modified) Benzene Ethylbenzene m/p-Xylene o- Xylene Styrene Toluene

(Bulk Density - Soil)

Standards Council of Canada	Accredited Laboratory No. 18
TM PREP 016-10;	Bulk Density and Specific Gravity of "As-Received" Samples (American Society of Agronomy No. 9, Part 1, Method 13-2 Modified) Bulk Density
(Calcium Carbonate - Soil)	
TM SOIL 133-10;	Calcium Carbonate in Soil by Dual pH (J. Ashworth, COM. SOIL SCI PLANT SCI 28, 841-848, 1997 Modified) Calcium Carbonate
(Conductivity - Soil)	
TM SOIL 001-10;	pH and Electrical Conductivity in Soil: Water (MSS Method 4.11/4.12 Modified) E.C. (1:2 water)
(Cyanide - Soil)	
TM WET 053-10;	Cyanide in Aqueous Solutions by Continuous Flow Colorimetry (NAQUADAT NO. 06608L/Method 335.3/ APHA 4500-CN ⁻ I/ APHA 4500-CN ⁻ C Modified) Cyanide, SAD Cyanide, Total Cyanide, WAD Cyanide, Water Soluble
(Extractable N/P/K - Soil)	
TM WET 018-10;	Extractable Nitrate, Phosphate and Potassium in Soils by Continuous Flow Colorimetry (SSMA Method 6.3/ APHA 4500-P D/ Method 19103 565 Modified) Nitrate Phosphorus Potassium
(Extractable Na/Ca/Mg/K So	il)
TM METAL 054-10; (Extractable Na/Ca/Mg/K/C.E.	Extractable Macro Nutrients in Soil by ICP (MSS Method 4.51/ APHA 3120 B Modified) Calcium Magnesium Sodium

TM METAL 053-10;	Exchangeable Cations and Cation Exchange Capacity (CEC) In Soil by Ammonium Acetate Extraction (MSS Method 3.32/APHA 3120 B/ APHA, 4500-NH ₃ G Modified) Ammonium C.E.C. Calcium Magnesium Potassium Sodium
(Extractable NH4/NO3 - Soil)	
TM WET 016-10;	Extractable Ammonium and Nitrate in Soil by Continuous Flow Colorimetry (MSS Method 4.35/ APHA 4500-NH ₃ G/ MSS Method 6.3 Modified) Ammonium Nitrate
(Extraction - Soil/Waste)	
TM SOIL 129-10;	Salinity, pH and EC of Field-Moist Soils (SSMA. 2008. pp. 161-168 Modified) Ammonium Calcium Chloride EC Extract Magnesium Nitrate + Nitrite pH Potassium Sodium Sulfur
(Hydrocarbons - Soil/Waste)	
TM OIL 027-10;	Dean Stark Analysis in Soil and Sludge (ACOSA REF. METHOD Modified) Oil Fraction Solids Fraction Water Fraction
(Leachable BTEX - Soil/Waste)	

TM WET 033-10;	Leachable BTEX in Solids and Waste by GC/PID + FID with headspace analyzer(SW-846, EPA1311, 5021A/8260B Modified) Benzene Ethylbenzene m/p-xylene o-xylene Toluene
(Lime Requirement - Soil)	
TM SOIL 060-10;	CaCO3 (Lime) Requirement in Soil by Single Buffer (SSMA 12.2 Modified) Lime Requirement - Soil
(Metals - Soil/Salm Digest)	
Ϋ́Υ,	
TM METAL 077-10;	Metals in Soil, Sludge, Sediment and Oily Waste by ICP OES (BCMOE SALM Modified) Aluminum Calcium Iron Magnesium Manganese Phosphorous Potassium Silicon Sodium Sulfur
(Metals - Soil/Salm Digest)	
TM METAL 077-10;	Metals in Soil, Sludge, Sediment and Oily Waste by ICP MS (BCMOE SALM/EPA Method 200.8/EPA 1311 TCLP/Special Waste Extraction Procedure Modified) Antimony Arsenic Barium Beryllium Bismuth Boron Cadmium Chromium Cobalt Copper

	Lead
	Lithium
	Mercury
	Molybdenum
	Nickel
	Selenium
	Silver
	Strontium
	Thallium
	Tin
	Titanium
	Uranium
	Vanadium
	Zinc
	Zirconium
	Ziroomum
(Organic Matter (LOI) - Soil)	
TM SOIL 019-10;	Organic Matter in Soil by Loss on Ignition (MSS Method 3.8 Modified)
	Organic Matter by LOI
(Particle Size Analysis)	
TM SOIL 032 - 10;	Particle Size Analysis of Soil by Dry Sieve (MSS Method 55.4 Modified)
TM SOIL 120 - 10;	Particle Size Analysis of Soil by Hydrometer (MSS Method 55.3 Modified)
	Diameter < 2mm
TM SOIL 121 - 10;	Particle Size Analysis by Wet Sieve (ASTM C117 Modified)
(Petroleum Hydrocarbons (PI	HC) - Soil)
TM ORG 001-10;	BTEX and F1 in Soil Samples by GC/MSD/FID (EPA 8260B/5021A/CCME-CWS-PHCS-TIER 1 Modified) F1: C6-C10
(pH - Soil)	
TM SOIL 001-10/021-10;	pH and Electrical Conductivity in Soil/pH in Soil by 0.01M Calcium Chloride (MSS Method 4.11 & 4.12/3.11 Modified) pH (0.01 M CaCl2) pH (1:2 Water/Soil)

(Phenols, Total - Soil)	
TM WET 058-10;	Phenol in Aqueous Solutions by Continuous Flow Colorimetry (APHA 5530D Modified) Phenols, Total
(Phosphorus, Olsen P - Soil)	
TM WET 101-10;	Sodium Bicarbonate Extractable Phosphorus (Olsen P) in Soil by Continuous Flow Colorimetry (SSMA 8.2.1/ APHA 4500-P D Modified) Bicarbonate Extractable
(Physical Parameters)	
(Thysical Farameters)	
TM SOIL 044 - 10;	Hydraulic Conductivity Saturated by Constant Head Method (MSS Method 2.5 Modified)
	Hydraulic Conductivity
(Saturated Paste - Soil)	
TM SOIL 022-10;	Sodium Absorption Ratio (SAR), pH and EC in Soil by Saturated Paste (SSMA CH.15 Modified) Ammonium Calcium Chloride EC Magnesium Nitrate + Nitrite pH Potassium Saturated Paste Extract Saturation Percentage Sodium Sulfur
(Soluble Sulfate - Soil)	
TM METAL 083-10;	Extractable Sulfur as Sulfate in Soils by ICP (MSS Method 4.47/ APHA 3120B Modified) Sulfate
(TEH in Soil/Water)	
<u>TM ORG 005-10</u>	
SCOPE OF ACCREDITATIO	N

	Analysis of Polynuclear Aromatic Hydrocarbons (PAHs) in Soil/Sludge, and Oil by GC/MS (EPA 3540/3611/8270 Modified)
	Acenaphthene
	Acenaphthylene
	Anthracene
	Benzo (a) anthracene
	Benzo (a) pyrene
	Benzo (b) fluoranthene
	Benzo (g,h,i) perylene
	Benzo (j) fluoranthene
	Benzo (k) fluoranthene
	Chrysene
	Dibenzo (a,h) anthracene
	Fluoranthene
	Fluorene
	Indeno (1,2,3-cd) pyrene
	Naphthalene
	Phenanthrene
	Pyrene
TM ORG 003-10;	Analysis of Petroleum Hydrocarbons in Soil and Water Using GC-FID (CCME-CWS-PHCS-TIER 1 Modified)
	F2 (C10-C16)
	F3 (C16-C34)
	F4 (C34-C50)
(Wettability - Soil)	
TM SOIL 049-10;	Molarity Ethanol Droplet Value (MED) (AB SOIL SCI WORKSHOP YOUNG. VOL 27, P.59-63, 1990 Modified) Wettability
Waste	
(Extractable Organic Halogens	s - Waste/Soil)
TM OIL 500-90	EOX in Soil/Waste (EPA 9023 modified)
	Extractable Organic Halogens
(Flash Point - Waste)	
TM OIL 025-10;	Flash Point in Liquid and Soil Samples by Penske-Martens Closed Cup Tester (ASTM D93Modified) Flash Point

(Free Liquids - Waste)		
TM SOIL 130-10;	Paint Filter Test (SW846, EPA 9095B Modified) Free Liquids - Waste	
Water (Inorganic)		
(Alkalinity (pH 4.5) and EC -	Water)	
TM WET 001-10;	pH, Electrical Conductivity and Total and Phenolphthalein Alkalinity in Water by PCTitrate Auto Titrator (APHA 2320 B/ APHA, 2510 B/ APHA, 4500-H ⁺ B Modified) Alkalinity (pH 4.5) Electrical Conductivity pH	
(Ammonia - Water)		
TM WET 008-10;	Ammonia-N in Aqueous Solutions by Continuous Flow Colorimetry (APHA 4500 NH3-G/EPA 1311 Modified) Ammonium	
(B.O.D.)		
TM WET 044-10;	Biological Oxygen Demand in Waters and Wastewaters by Incubation (APHA 5210B Modified) BOD CBOD	
(BCMOE Total Metals - Wate	r)	
TM Metal 080-10;	Metals in Aqueous Solutions by ICP-OES (British Columbia Environmental Lab Manual (2009) - Digestion for Total Metals in Water - Prescriptive/APHA 3120B/APHA 3030F) Total Calcium Total Iron Total Magnesium Total Magnese Total Phosphorus Total Phosphorus Total Potassium Total Silicon Total Sodium Total Sulfur	
TM Metal 081-10;		

SCOPE OF ACCREDITATION

	Trace Metals in Aqueous Solutions by ICP-MS (British Columbia Environmental Lab Manual (2009) - Digestion for Total Metals in Water - Prescriptive/EPA 200.8/APHA 3125B
	Modified)
	Total Aluminum
	Total Antimony
	Total Arsenic
	Total Barium
	Total Beryllium
	Total Bismuth
	Total Boron
	Total Cadmium
	Total Chromium
	Total Cobalt
	Total Copper
	Total Iron
	Total Lead
	Total Lithium
	Total Manganese
	Total Molybdenum
	Total Nickle
	Total Selenium
	Total Silver
	Total Strontium
	Total Thalium
	Total Thorium
	Total Tin
	Total Titanium
	Total Uranium
	Total Vanadium
	Total Zinc
	Total Zirconium
(C.O.D Water)	
TM WET 050-10;	Chemical Oxygen Demand in Water and Wastewater by Block Digestion (APHA 5220 D Modified) COD
(Carbon - Water)	
TM WET 020-10	TOC, DOC, TIC, DIC, and TC in Water and Wastewater by High Tomporature Combustion (APHA 5210P)

High-Temperature Combustion (APHA 5310B) Carbon-Dissolved Inorganic

Standards Council of Canada	Accredited Laboratory No. 18
	Carbon-Dissolved Nonpurgeable Organic Carbon-Total Carbon-Total Inorganic Carbon-Total Nonpurgeable Organic
(Chloride - Water)	
TM WET 100-10	Chloride in Aqueous Solutions by Colorimetric Discrete Analyzer (APHA 4500 Cl E Modified) Chloride
(Chlorine - Water)	
TM WET 068-10;	Total and Free Chlorine in Water by Spectrophotometer (APHA 4500-CL G Modified) Free Chlorine Total Chlorine
(Chromium -Hex - Water)	
TM WET 075-10;	Hexavalent Chromium in Aqueous Solutions by Colorimetric Centripetal Analyzer (APHA 3500 CR B//EPA 1311 Modified) Chromium (Hexavalent)
TM WET 102-10	Low Level Hexavalent Chromium in Water and Waste Water by Continuous Flow Colorimetric Analyzer (APHA 3500 CR B Modified)
	Low Level Chromium
(Color - Water)	
TM WET 025-10;	True and Apparent Color in Water by Visual Comparison (APHA 2120 B Modified) Color
(Cyanate - Water)	
TM WET 095-10;	Cyanate in Water and Wastewater by Continuous Flow Colorimetry (APHA 4500-CN-L Modified) Cyanate
(Cyanide - Water)	
TM WET 053-10;	Cyanide in Aqueous Solutions by Continuous Flow Colorimetry (NAQUADAT 06608L/ EPA 335.3/ APHA 4500-CN C/APHA

4500-CN-I/EPA 1311/Special Waste Extraction Procedure Modified) Cyanide - Dissolved Cyanide - SAD Cyanide - Total Cyanide - WAD

(Dissolved Metals - Water)

TM METAL 081-10;

Trace Metals in Aqueous Solutions by ICP-OES (EPA 200.8 /APHA 3125 B Modified) **Dissolved Aluminum Dissolved Antimony Dissolved Arsenic Dissolved Barium Dissolved Beryllium Dissolved Bismuth Dissolved Boron Dissolved Cadmium Dissolved Chromium Dissolved Cobalt Dissolved** Copper **Dissolved** Iron **Dissolved Lead Dissolved Lithium** Dissolved Molybdenum **Dissolved Nickel Dissolved Selenium Dissolved Silver Dissolved Strontium Dissolved Thallium** Dissolved Tin **Dissolved** Titanium **Dissolved Uranium Dissolved Vanadium Dissolved Zinc Dissolved Zirconium**

(Dissolved Metals - Water (High Range))

TM METAL 080-10; Metals in Aqueous Solutions by ICP-OES (APHA 3120 B/ APHA 3030 F Modified) Dissolved Barium (High) Dissolved Calcium

Dissolved Iron (High) Dissolved Magnesium Dissolved Manganese (High) Dissolved Phosphorus Dissolved Potassium Dissolved Silicon Dissolved Sodium Dissolved Sulfur Hardness - Calculation Sodium Absorption Ratio - Calculation

(Dissolved Solids - Formation Water)

TM WQ 035-10	Filterable Residue in Oilfield Water, Gravimetric (APHA 2540 C/APHA 2540 E Modified) Dissolved Solids - Ignited @ 550°C Dissolved Solids - Dried @ 105°C
(Dissolved Solids - Water)	
TM WET 055-10;	Dissolved Solids (APHA 2540 C/ APHA 2540 E Modified) Fixed Dissolved Solids Total Dissolved Solids Volatile Dissolved Solids
(Extractable Metals - Water)	
TM METAL 080-10;	Metals in Aqueous Solutions by ICP-OES (APHA 3120 B/APHA 3030 F Modified) Extractable Calcium Extractable Iron Extractable Magnesium Extractable Manganese Extractable Phosphorus Extractable Potassium Extractable Solium Extractable Solium
(Extractable Metals - Water)	
TM METAL 081-10;	Trace Metals in Aqueous Solutions by ICP-MS (EPA 200.8/APHA 3125 B Modified)

Extractable Aluminum

Extractable Antimony Extractable Arsenic Extractable Barium Extractable Beryllium Extractable Boron Extractable Cadmium Extractable Chromium Extractable Cobalt **Extractable Copper** Extractable Iron Extractable Lead Extractable Lithium Extractable Molybdenum Extractable Nickel Extractable Selenium Extractable Silver **Extractable Strontium** Extractable Thallium Extractable Tin Extractable Titanium Extractable Uranium Extractable Vanadium Extractable Zinc Extractable Zirconium

(Major Ions - Water)

TM WET 012-10;

Anions in Aqueous Solutions by Ion Chromatography (APHA 4110 B/EPA 1311/Special Waste Extraction Procedure Modified) Bromate Bromide Chlorate Chlorate Chlorite Fluoride Iodide Nitrate Nitrite Phosphate Sulfate

(Mercury - Water)

Standards Council of Canada Accredited Laboratory No. 18		
TM METAL 063-10;	Mercury in Aqueous Solutions by Cold Vapour Atomic Absorption (EPA Method 245.5/APHA 3112B Modified) Mercury - Dissolved Mercury - Extractable Mercury - Total	
(Nitrogen Total - Water)		
TM WET 040-10;	Total Nitrogen in Water and Wastewater by High-Temperature Combustion (ISO/TR 11905:1997(E) Modified) Dissolved Kjeldahl Nitrogen Total Kjeldahl Nitrogen Total Nitrogen	
(Oil and Grease - Water)		
TM OIL 065-10;	Total Oil & Grease in Water by Gravimetric Analysis (EPA 1664 Modified) Total Oil and Grease	
(Phenols - Water)		
TM WET 058-10;	Phenol in Aqueous Solutions by Continuous Flow Colorimetry (APHA 5530 D/EPA 1311 Modified) Phenols	
(Phosphorus - Water)		
TM WET 073-10/TM WET 099-10	Ortho-Phosphate in Water by Colorimetric Discrete Analyzer /Total and Dissolved Phosphorus in Water by Smartchem Colorimetric Discrete Analyzer (10APHA 4500 P-F/ APHA, 4500-P B/APHA, 4500-P F Modified) Orthophosphate (SRP) Total Dissolved Phosphorus Total Phosphorus	
(Reactive Silica - Water)		
TM WET 091-10;	Molybdate Reactive Silica in Water by Spectrophotometer (APHA 4500 SIO2 C Modified) Reactive Silica	
(Sulfide - Water)		

Standards Council of Canada	Accredited Laboratory No. 18	
TM WET 057-10;	Total Sulfide in Aqueous Solutions by Automated Gas Dialysis (APHA 4500 S2-E Modified) Sulfide	
(Suspended Solids - Water)		
TM WET 056-10;	Total Suspended Solids in Water and Wastewater Dried at 104° C (APHA 2540 D/ APHA 2540 E Modified) Fixed Suspended Solids Total Suspended Solids Volatile Suspended Solids	
(Thiocyanate - Water)		
TM WET 096-10;	Thiocyanate in Water and Wastewater by Colorimetric Centripetal Analyzer (APHA 4500 CN- M Modified) Thiocyanate	
(Turbidity - Water)		
TM WET 064-10;	Turbidity in Water and Waterwaster by Nephelometric Method (APHA 2130 B Modified) Turbidity	
Water (Organic)		
(BTEX - Water)		
TM ORG 001-10;	BTEX and F1 in Water Samples by MSD/FID (CCME-CWS-PHCS-TIER 1/EPA 5021A/8260B/ Modified) Benzene Ethylbenzene m/p-Xylene o-Xylene Styrene Toluene	
(Petroleum Hydrocarbons (PH	C) - Water)	
TM ORG 001-10;	BTEX and F1 in Soil Samples by GC/MSD/FID (CCME-CWS-PHCS-TIER 1 Modified) F1: C6-C10	
Water (Toxicology)		

(Microtox - Water)

TM BIO 037-10;Microtox 15 Minute, Multiple Concentration, Acute, Static
EC50 Bioassay (EPS 1/RM/24 Modified)
Microtox EC 50 (15min)

NON METALLIC MINERALS AND PRODUCTS

Petroleum Crudes and Natural Gas:

(Acid Neutralization Number)

TM OIL 241-90	Acid Number by Potentiometric Titration, (ASTM D 664, Modified) Acid Number	
(Asphaltenes: nC5 insoluble)		
TM OIL 200-90;	Asphaltenes Content Of Crude Oil, Condensate And Bitumen (Syncrude Method 5.1, Modified) Asphaltene	
(Benzene Emissions)		
TM GAS 037-90	Benzene Emissions Reduction Trailer Analysis	
(BS&W - Oil)		
TM OIL 040-90;	Sediment and Water (BS&W) in Crude and Heavy Oil: Centrifuge Method (ASTM D 4007 Modified)	
(Composition - Liquid Hydrocarbon)		
TM GAS 015-90	High Pressure Liquid Analysis (D 5307 modified) Only for: N2, CO2, H2S, C1-C30+, Benzene, Toluene, Ethylbenzene & p+m Xylene, o-Xylene, 1,2,4 Trimethylbenzene, Cyclopentane, Methylcyclopentane, Cyclohexane, Methylcyclohexane, Density, Relative Molecular Mass and Gas Equivalent Factor	
TM GAS 016-90	Low Pressure Liquid Composition Analysis (D 5307 modified) Only for: H2S, C1-C30+, Benzene, Toluene, Ethylbenzene & p+m Xylene, o-Xylene, 1,2,4 Trimethylbenzene, Cyclopentane, Methylcyclopentane, Cyclohexane, Methylcyclohexane, Density, Relative Molecular Mass and Gas Equivalent Factor	

(Composition - Natural Gas)		
TM GAS 023-90;	Compositional Gas Analysis (GPA 2261 Modified) /GPA 2286 Modified) Only for: N2, CO2, C1-C10+, He, H2, H2S Density, Gross Heating Value, Pseudocritical Pressure and Temperature, Relative Molecular Mass (Total and C7+) and Vapour Pressure (C5+)	
TM GAS 028-90;	Extended Gas Analysis: GPA 2286 (GPA 2286 Modified) Only for: N2, CO2, C1-C30+, He, H2, Density, Gross Heating Value, Pseudocritical Pressure and Temperature, Relative Molecular Mass (Total and C7+) and Vapour Pressure (C5+)	
(D86 Atmospheric Distillation)		
TM OIL 150-90;	D86 Atmospheric Distillation (ASTM D 86, Modified)	
(Density - Oil)		
TM OIL 050-90	Absolute and Relative Density and API Gravity: Digital Density Meter (ASTM D 4052 Density, Relative Density, Modified/ASTM D 5002 Modified)	
(Flash Point - Closed Cup)		
TM OIL 171-90	Flash Point of Petroleum Oils and Lubricants (ASTM D 93, Modified) Flash Point	
(Kinematic and Absolute Viscosity)		
TM OIL 145-90	Dynamic Viscosity and Density of Liquids by Stabinger Absolute Viscosity Kinematic Viscosity	
(LPG or NGL Composition)		
TM GAS 009-90;	NGL Analysis by Gas Chromatography (ASTM D 2163 Modified) Only for: N2, CO2, H2S, C1-C12+, Density, Relative Molecular Mass and Gas Equivalent Factor	
(Micro Carbon Residue)		
TM OIL 135-90	Micro Carbon Residue (ASTM D 4530 modified)	

Micro Carbon Residue

(Organic Chloride Content in Crude Oil)

TM OIL 076-90	Organic Chloride Content of Crude and Waste Oil (ASTM D 4929, Method A, Modified) Organic Chloride	
(Reduced Sulfur Species - Gas)		
TM GAS 014a-90	Total Reduced Sulfur Analysis of Natural Gas : Gas Chromatography/Sulfur Chemiluminescence Detector. (ASTM D 5504; Modified)	
	Only for: Hydrogen sulfide, Carbonyl Sulfide, Sulfur Dioxide, MethylMercaptan, EthylMercaptan, DimethylSulfide, Carbon Disulfide, i-PropylMercaptan, t-ButylMercaptan, n-PropylMercaptan, MethylEthylSulfide, s-ButylMercaptan, i-ButylMercaptan, Diethylsulfide, n-ButylMercaptan, Dimethyl disulfide	
(Total Sulfur - Oil)		
TM OIL 060-90	Total Sulfur: X-Ray Fluorescence Method (ASTM D 4294 Modified)	
(Water Content)		
TM OIL 160-90	Water Content by Coulometric Karl Fisher Titration (ASTM D 4928 modified) Water Content	
Notes:		
AOAC: Official Methods of Analysis International		
ASTM: American Society of Testing and Materials		
APHA: Standard Methods for the Examination of Water & Wastewater		
BCMOE: British Columbia Ministry of Environment		

CAN-P-4E (ISO/IEC 17025): General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025: 2005)

CAN-P-1585: Requirements for the Accreditation of Environmental Testing Laboratories

CCME-CWS-PHCS Tier 1: Canadian Council of Ministers of the Environment, Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 **EPA:** Environmental Protection Agency

PREP #, BIO #, WET #, ORG #, METAL #, SOIL #, GAS #, OIL #, TO #, WQ #: Exova in-house Test Methods.

GPA: Gas Processors Association

MSS: Manual on Soil Sampling and Methods of Analysis - J.A. McKeague, 1978

SMAA: Soil Sampling and Methods of Analysis, Martin R. Carter, 2008

SSA: Soil Science Society of America

Chantal Guay, ing., P. Eng. Vice President, Accreditation Services

Date: 2016-09-06

Number of Scope Listings: 90 SCC 1003-15/31 Partner File #0 Partner: SCC