



## MOBILE LABORATORY CAPABILITIES – WESTERN CANADA



With the most extensive network of laboratories and service centres throughout Canada, Maxxam provides comprehensive environmental analysis for contaminants in soil, water, and air.

The data collected helps our customers comply with environmental regulations and standards to protect human health and the environment.



### EMERGENCY RESPONSE AND ON-SITE ENVIRONMENTAL ANALYSIS

Maxxam's fleet of mobile laboratories, based out of Calgary, lets us respond quickly to emergency situations that require rapid, on-site analyses. An on-site laboratory helps expedite remediation projects, particularly for remote locations or where immediate testing is required.

The primary focus of the mobile laboratory is to provide analyses associated with hydrocarbon contamination events. Maxxam has extensive experience in providing accredited mobile laboratory service to our customers at hundreds of sites throughout the western provinces and offer on-site project management, including supply and sample management.

### QUALITY CONTROL AND DATA REPORTING

Our mobile laboratories operate under a strict quality assurance and quality control program. We apply the same procedures for data reporting and sample treatment as our main laboratories. Analytical data generated at the mobile laboratory are uploaded from the field and reported through our Laboratory Information Management System.

### ANALYTICAL METHODOLOGY

The analyses we offer through our mobile laboratories provide detection of petroleum hydrocarbons in soil and water to meet the BC Environmental Management Act Contaminated Sites Regulation (BC-CSR). We offer fully validated methods accredited by the Canadian Associated for Laboratory Accreditation (CALA) under ISO 17025 for analysis of Extractable Petroleum Hydrocarbons (EPH); F1-F4; Benzene, Toluene, Ethylbenzene, and Xylenes, and Volatile Hydrocarbons (BTEX, VH). The BC Ministry of Environment has accepted us for direct reporting from our mobile laboratories without additional confirmation from our main laboratory.

### TESTING CAPABILITIES

The set-up time for a mobile laboratory is four hours, including fully calibration of the instruments. Our average throughput is 20 samples per day in soil and water, but can be increased by adding additional analysts on site. We can provide results for priority samples within the hour (once QC samples have run).

# MOBILE LABORATORY CAPABILITIES



Each mobile laboratory is equipped with 2 Gas Chromatographs (GC) allowing for simultaneous F2-F4 and BTEX/VH analysis.

Our mobile laboratories include:

- Two full-sized, industry standard GCs
- Autosamplers for continuous unsupervised overnight/weekend analysis
- Headspace GC-FID/PID capabilities
- Custom reporting including chromatograms
- Independent power
- Secure, water-cooled 10KW on-board diesel generators
- On-board fridges and freezers for storing samples and extracts

## DETECTION LIMITS

Detection Limits are evaluated using U.S. EPA protocols. Estimated quantitation limits (EQLs) are as follows:

Component	Water (µg/L)	Soil (mg/Kg)
BTEX by HS	0.4	0.005-0.04
VPH by HS	300	10
F1 BTEX by HS	100	10
EPH (C10 - C19)	200	100
EPH (C19 - C32)	200	100
F2	100	50
F3	100	50
F4	200	50

## ANALYSES

Benzene, Toluene, Ethylbenzene, Xylene(s) (BTEX) and Volatile Hydrocarbons (Gasoline Range Organics C6 - C10): Soil samples are extracted with organic solvent(s). Two surrogate compounds are added to the samples prior to extraction. The solvent extracts are analyzed using capillary column gas chromatography. VH(C6-C10) range organics are quantified using a reference mixture of aliphatic and aromatic compounds and a flame ionization detector (FID). BTEX compounds are analysed and quantitated using a photo-ionization detector (PID).

Extractable Hydrocarbon (>C10 - C19) and (>C19 - C32) Range Organics and F2-F4: water and soil samples are extracted with organic solvent(s). Water samples are tumbled with the solvent. The solvent extracts are analysed using capillary column gas chromatography (flame ionization detector). Diesel and lube range organics are quantified using a reference mixture of aliphatic and aromatic compounds. Results from the mobile laboratory have been proven equivalent to the BC-CSR method for EPH and CCME method for F2-F4, using standard reference material customer samples.

To increase your team's readiness for an emergency situation, contact your account manager, or to initiate Maxxam's Emergency Response Service, call:

1.855.MAXXAM.1 (1.855.629.9261)

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