



# TRADEWIND SCIENTIFIC LTD.

## ENVIRONMENTAL MONITORING SERVICES



- ⇒ TRADEWIND SCIENTIFIC LTD. HAS BEEN ACTIVE IN ENVIRONMENTAL MONITORING AND ASSESSMENT PROJECTS FOR MORE THAN 25 YEARS, WITH A FOCUS ON THE TRANSPORTATION SECTOR
- ⇒ AIRPORT AIR QUALITY MEASUREMENTS, MODELLING AND ANALYSIS USING STATE OF THE ART EQUIPMENT HAS BEEN CONDUCTED AT MORE THAN 15 LOCATIONS NATION-WIDE
- ⇒ WATER QUALITY MONITORING STATIONS HAVE BEEN DESIGNED, INSTALLED, AND OPERATED BY THE COMPANY AT OVER 30 SITES

**T**radewind Scientific Ltd. provides a wide range of environmental monitoring, modeling and assessment services at major urban areas across Canada.

### **Air Quality Monitoring**

Since 1980 Tradewind Scientific has been conducting Canada-wide airport air quality studies. These projects involve long-term (6-12 months) ambient air quality monitoring measurements combined with detailed data analysis. Our company and personnel have undertaken many other environmental and emission monitoring studies and are recognized experts in the domain of air quality assessment at major Canadian airports. The company has also participated in two public environmental hearings related to transportation infrastructure development. Recent projects include long-term monitoring studies in Halifax, Victoria and Toronto under the direction of Transport Canada in conjunction with Local Airport Authorities. The studies include the measuring and modeling of Criteria Pollutants as well as VOC (volatile organic compounds) and related

chemicals. An active Research and Development program has focused on practical semi-empirical modeling for the prediction of pollutant concentrations at major transportation hubs.



### **Water Quality Monitoring**

Starting in 1990, Tradewind Scientific initiated a program to design, develop, implement and install automated water quality monitoring stations at many airports nation-wide. The design involved the combination of refrigerated, discrete, sequential samplers with electronic recording flow-meters and associated con-

trol equipment. Remote data logging, downloading and programming functions have also been developed by the company using cellular and radio transceiver equipment. There are now more than 30 operational water monitoring stations across Canada used for year-round water quality assessment.

### **Noise Monitoring**

The air transportation sector is a significant source of noise pollution. Tradewind Scientific was instrumental in developing specialized noise monitoring and measurement systems, including undertaking extensive research related to the acoustic impacts of supersonic flight.





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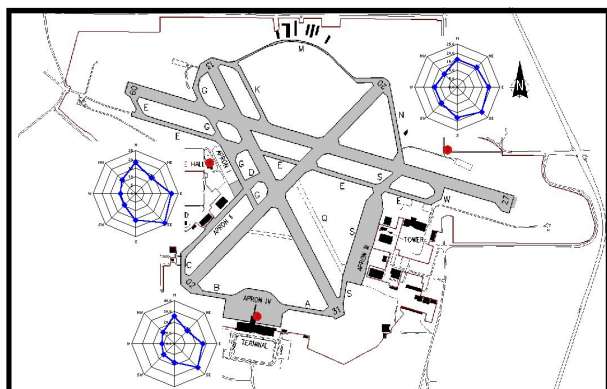
### OVERVIEW

#### DATA COLLECTION

- 24 hour air and water quality monitoring services using remote telecom capabilities
- Sampling time-table and trigger conditions programmable at the field station or remotely from base station and mobile computers
- Remote download of data such as pollutant concentrations, meteorological, flow and sampling events
- Field-tested and proven components and software
- Project management coast-to-coast across Canada

#### DATA ANALYSIS & MODELING

- Extensive, in-house data analysis capabilities using both proprietary and commercial software programs
- Large, searchable database of environmental parameters for comparative and trend analysis
- Access to provincial and national environmental and meteorological data and survey programs
- Experience with various recognized air quality models, including EDMS (Emission and Dispersion Modeling System)
- In-house R&D program focusing on the development of semi-empirical modeling technologies



#### INSTALLATION

- Site installation, configuration, and commissioning
- System integration using COTS (Commercial Off The Shelf) equipment wherever practical.



#### TRAINING

- Qualified technical training personnel
- Training courses covering the theory and practice of environmental monitoring, modeling and assessment are available on request

#### MAINTENANCE SERVICES

- Experienced senior field personnel
- Well-equipped service and calibration center
- Remote condition monitoring and diagnosis

For further information, write or call:

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