



TOGETHER

ECOTECH'S MAGAZINE ABOUT ENVIRONMENTAL MONITORING

2018 Issue 3

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Ecotech

ACOEM Group



Emergency Response Vehicle Accurately Monitors Visibility & Particulate Levels During Wild Fires in North America

About Ambilabs®: Ambilabs® is a leading provider of air, environmental, and process monitoring solutions. Their expertise in engineering, software, instrumentation systems and solutions assists their customers to obtain valid, accurate and precise information concerning air quality.

Ambilabs® is an authorised distributor of ECOTECH products in USA, Canada and the Caribbean.

Cover pic: Sarek National Park, Jokkmokk, Sweden.

Purpose-built, mobile Emergency Response Vehicles (ERV) equipped with an ECOTECH Aurora™ 3000 Nephelometer provide a new level of smoke and particulate monitoring to help authorities in emergency fire situations.

As the frequency and severity of catastrophic fire events around the world appears to increase, Ambilabs® is helping to minimise the impact on the health of communities with ingenuity, engineering excellence and ECOTECH monitoring equipment.

Deadly wildfires occurred in Northern California and Portugal during 2017. Not only did these wildfires lead to the tragic loss of dozens of lives, they also caused incredibly high levels of resulting pollution. The Northern Californian fires were responsible for Particulate Matter_{2.5} (PM_{2.5}) emissions equivalent to the total annual rate of vehicle pollution for the entire state of California.

During fire emergency situations, accurate monitoring of PM_{2.5}, smoke, dust and haze gives local authorities the ability to help protect the local population from the harmful effects of exposure to increased levels of smoke-related pollution.

Originally designed for use in the oil and gas industry, an Ambilabs® Emergency Response Vehicle (ERV) was deployed in fire-affected areas of British Columbia, Canada in 2017 to ensure accurate monitoring of visibility and particulate levels as the result of forest wildfires.

The 2017 British Columbia fire season was its worst on record, with the most extensive total area burnt, the largest ever single fire in the region, and the greatest number of evacuees.

ECOTECH Aurora™ Nephelometers

As a signature line in ECOTECH's extensive suite of monitoring products, the Aurora™ range of integrating nephelometers measures the light scattering coefficient of ambient aerosol particles with high sensitivity and time resolution. These instruments can be applied to a wide range of monitoring and research applications related to air pollution and climate.

Aurora™ is used to monitor visibility in fires, haze, smog, dust storms, aircraft emissions and radiation balance in global warming studies. It can also correlate with PM_{2.5} mass measurement to monitor industrial and automotive pollution typically caused by vehicle emissions in the air.

"In designing and deploying the Ambilabs® ERVs, we rely on ECOTECH's Aurora™ nephelometer to provide the most accurate, flexible and cost-effective way to monitor the dispersal of natural and artificial aerosols in the air," said Ambilabs CEO, Andy Tolley.

"In particular, Aurora™'s versatility means it can be used in even the most isolated locations with remote controlled calibration for precision data collection, validation and reporting. These features are even more crucial in emergency situations like large scale fires," he added.

(Continues on page 4)

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(Continued from page 3)

The ability to monitor air quality while the van is moving is a significant advantage of using the Aurora™ nephelometer combined with gas analysers inside the vehicle.

Four Ambilabs® ERVs have been deployed in North America. However, the dramatic fire events of the 2017 summer/early autumn season in North America have led to an increased level of inquiries from government and environmental agencies wanting to learn how ERVs with Aurora™ nephelometers can be used for different emergency response applications in the future.

For more about the Ambilabs® Emergency Response Vehicles, please email info@ambilabs.com

For more information about the range of ECOTECH Aurora™ integrating nephelometers please contact Felicity Sharp at felicity.sharp@ecotech.com or visit www.ecotech.com/product/particulates 



At the heart of the Ambilabs® Emergency Response Vehicle is the ECOTECH Aurora™ 3000 nephelometer.



Sintrol DUMO uses Inductive Electrification to Produce Better Dust Trending Indication

The Sintrol DUMO is a revolutionary dust trend monitoring device, tailor made for the mining industry and distributed exclusively in Australia by ECOTECH.

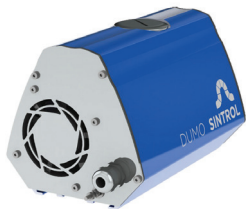
Sintrol DUMO: A small but robust dust trending device suitable for above and below ground mining operations. The DUMO (pronounced “dew-mo”) was recently mounted on a mine haul truck during successful field trials in Western Australia (WA).

ECOTECH instruments are synonymous with excellence in dust and particulate monitoring. For several decades ECOTECH has worked closely with the mining industry and environmental agencies in WA to ensure environmental regulation compliance, and the health and safety of mining employees and local communities.

This new technology complements the ECOTECH range of dust monitoring devices.

(Continues on page 6)

Main pic: The Sintrol DUMO at work mounted on a mine haul truck in Western Australia.



Pic above: The Sintronic DUMO is suitable for underground and above ground dust monitoring.

(Continued from page 5)

ECOTECH is the largest supplier of dust and fence line monitoring products and services to the mining industry in WA. ECOTECH has now sourced a new kind of dust monitoring trend device from Finland. Made by one of the world's largest dust monitor manufacturers, Sintronic DUMO is unique in its ability to monitor a wider range of dust concentrations – from low to high, and to easily alert users about changes in events or conditions as they occur. The system is designed to work both above (Sintronic DUMO version “M”) and below ground (Sintronic DUMO version “G”). Multiple Sintronic DUMO units can also be networked with each other to help isolate dust sources in real-time.

Wider base detection and improved output

The Sintronic DUMO dust monitor is based on distinctive Inductive Electrification technology, providing a repeatable linear output. The output can also be correlated to provide dust concentration. Whereas other dust monitors typically only register a change in dust levels when dust particles directly hit a probe, the Sintronic DUMO works differently, and gives a better trending indication and a wider field of capture.

The measurement is based on particles interacting with an isolated probe mounted into the duct or stack. When moving particles pass by or hit the probe, a signal is induced. This signal is then processed through a series of advanced algorithms to filter out noise and provide an accurate dust measurement output.

Sintronic DUMO is capable of monitoring low dust concentrations and particle sizes as small as 0.3 micrometres.

Health and safety as a priority alongside greater efficiencies

The Sintronic DUMO has successfully completed field trials in Newman, WA, where it was used on haul trucks to transport ore from blast site to processing plant. A simple traffic light system alerts the user to variations in concentration of dust levels from fine to medium to high. Dust levels are auto-calibrated in a matter of minutes, allowing mining

companies to see the locations where haul road dust suppression is required, and to target the use of the water trucks more efficiently.

According to Andy Park, ECOTECH Sales Engineer, the ability of Sintrol DUMO to perform in high dust applications makes it the perfect dust monitoring tool for the mining industry.

“As many of the haul trucks currently in operation are already fitted with GPS technology, the addition of the Sintrol DUMO provides a simple and cost-effective solution for controlling water dispersion to dampen down dust levels only when and where required, rather than at predetermined regular intervals,” he said.

“In addition to potential cost savings, Sintrol DUMO also has a strong health and safety benefit, identifying and alerting mine staff to any dust spillage event or change of conditions in the mine itself, in stockpiles, on conveyor belts or on the trucks,” he added.

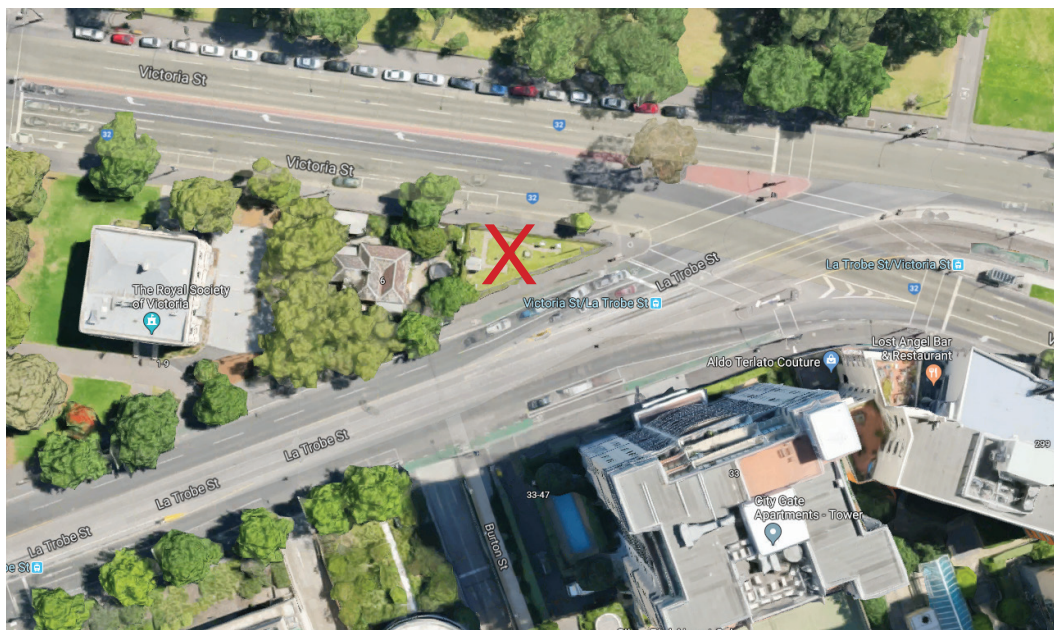
Hazardous area certification

The Sintrol DUMO (Version “G”) is suitable for underground dust monitoring, and is the only hazardous area monitor available. This is particularly important in coal mining, where at the first sign of a hazardous rise in dust levels, Sintrol DUMO can send an alarm signal to immediately activate filters, ventilation and dust suppression systems.

The Sintrol DUMO dust trending device, with its wireless communication capabilities, is portable, robust and tolerant to a variety of industrial environments where harmful dust concentrations are encountered.

For more information or to arrange a demonstration of the Sintrol DUMO, contact Andy Park on +61 (0)8 9434 7800 or andy.park@ecotech.com 

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Monitoring Traffic-Related Dust in Melbourne City

Pic: 400 m away from the World Heritage-listed Royal Exhibition Building, "X" marks the spot. A BAM 1022 Particulate Monitor located on the corner of La Trobe and Victoria Streets in Melbourne CBD. (Image source: Google Maps).

On a small and inconspicuous triangular plot of land, ECOTECH is quietly helping to accurately monitor potentially harmful dust levels from vehicle emissions in the Melbourne CBD.

A local authority has installed its first BAM 1022, with dust monitoring data gathered and published in real time. The instrument measures and records airborne particulate concentrations, and is highly accurate with improved sensitivity and time resolution.

A dust pollution watchdog

The BAM 1022 is a portable Beta Attenuation Mass (BAM) by Met One Instruments Inc. It is the first outdoor dust monitor on the market that delivers real-time, precise measurements and doesn't require a separate exterior casing or shelter. It can be deployed easily, in any location, with push data designed for online viewing capabilities.

Local authorities are using the instrument to measure PM_{2.5} emitted from petrol and diesel cars and trucks. The dust is easily inhalable and can potentially get into people's lungs and bloodstream. People with cardiovascular disease, asthma or high sensitivity to allergens are particularly at risk.

"With the new BAM 1022 in place, the opportunity has arisen to accurately measure and monitor PM_{2.5}, and identify exact sources and levels of this inhalable dust in Melbourne's CBD. This technology can protect vulnerable communities," said Stefanus Irwanto, ECOTECH Southern Branch Manager.

"ECOTECH has been working with Met One Instruments for over a decade, deploying hundreds of BAM units across Australia and New Zealand in the mining, quarrying and energy industries," he added.

Exclusive Australian distributor of Met One Instruments

ECOTECH is the exclusive Australian distributor of environmental products manufactured by US-based Met One Instruments (MOI). MOI equipment complements ECOTECH's extensive range of monitoring instruments and the two companies work collaboratively in research and development to ensure that all MOI monitoring units distributed in Australia meet the specific needs of the Australian environment.

Stefanus identified the following noteworthy benefits of the BAM 1022:

- Does not require a temperature controlled shelter
- Reduced power consumption
- Provides smaller carbon footprint
- Easy to service
- Enhanced reliability
- Quick set up time (less than 15 minutes).

For more information about the BAM 1022, please contact Stefanus Irwanto on +61 (0)3 9730 7800 or stefanus.irwanto@ecotech.com 

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01dB Leads Environmental Monitoring on Asia's Largest Railway Project - Malaysia's MRT

Main pic: Works underway for Malaysia's MRT Line 2.

Pic opposite: The ORION covers all vibrations created by human activity and offers unique features such as waterproofing and a battery life of 30 hours.

After several years of noise monitoring for MRT, 01dB is now also focussing on the project's vibration control.

In 2012, 01dB and their partner in Malaysia began working with MMC-Gamuda KVMRT (PDP SSP) Sdn Bhd, the Project Delivery Partner of the Mass Rapid Transit Corporation on Phase 1 of MRT Line 2 – the largest railway project in South East Asia. MSungai Buloh–Serdang–Putrajaya MRT Line 2 is a fully automated and driverless rail system that forms part of the larger rail transport network in the Klang Valley area near Kuala Lumpur, Malaysia.

The partnership was developed and championed by ACOEM Asia Managing Director, Patrice Pischedda. During Phase 1 of the project, 01dB integrated their DUO noise monitoring system to ensure effective noise measurement and compliance with the Malaysian Department of Environment (DOE)'s planning guidelines. Due to the success of Phase 1, Patrice was approached by the developers to provide a vibration monitoring solution that could be used in parallel with DUO.

New vibration technology complements 01dB noise monitoring instruments

The launch of ORION in mid-2016 gave Patrice the opportunity to extend 01dB's relationship with the MRT Line 2 project. The portable, DIN 45669-compliant ORION was introduced into PHASE 2 of the construction process and will continue to be used throughout Phase 3 to project completion, which is expected in 2021.

ORION guarantees international standards compliance

ORION was used for Phase 2's baseline monitoring (the ambient vibration level measured prior to construction works) and will continue to be utilised throughout the duration of piling works along 52.2 km of track, of which 13.5 km is underground. ORION's measurement of Peak Component Particle Velocity (PCPV) and the resulting Peak Particle Velocity (PPV) will assess any potential structural damage in the area as a result of construction work and ensure strict adherence to government regulations.

Throughout the MRT project, 01dB has also been working closely with the Institute of Noise and Vibration at the Universiti Teknologi Malaysia Kuala Lumpur (INV). Under the leadership of Professor Ir Dr M Salman Leong, one of South East Asia's foremost experts on the environmental impact of noise and vibration, guidelines were established on what type of instruments should be employed and how to use them for the construction process.



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ORION’s self-monitoring capabilities with on-board memory, automated data storage and transmission, makes it the perfect complementary device to DUO.
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It was INV’s recommendations for precision and certified monitoring systems designed for specific applications that led to 01dB being selected as the supplier of choice.

“With both DUO and ORION in place on the MRT Line 2 project, we now have the ability to deliver consistently accurate monitoring data for noise and vibration,” said Patrice.

“ORION’s IP65 waterproof level, lower frequency range, easy QR code and mobile app configuration, along with self-monitoring capabilities with on-board memory, automated data storage and transmission, makes it the perfect complementary device to DUO on this project,” he added.

For more information about ORION, DUO and 01dB’s full range of noise and vibration monitoring solutions, please contact Mark Neaves on +61 (0)7 3393 7400 or mark.neaves@ecotech.com

ECOTECH is the master distributor of 01dB products in Australia and New Zealand. 



01dB noise and vibration monitoring solutions are being used throughout the MSungai Buloh–Serdang–Putrajaya MRT Line 2 project.



Pics left: The portability and durability of 01dB's DUO and CUBE monitoring devices made them easy to use in tandem on the MRT Line 2 project in Malaysia.



Rent or Buy 01dB Noise Monitoring Equipment from Air-Met Scientific

Main pic: Air-Met Scientific Rental Manager, Andrew Marom says the most popular 01dB noise monitoring instrument available for long and short-term rental periods is the DUO sound level meter & monitoring station.

With over 30 years of expertise in providing scientific instrument-solutions in six locations around Australia, Air-Met has chosen 01dB to meet the noise and vibration monitoring needs of its Australian customers with:

- DUO – Sound level meter & monitoring station
- FUSION – Smart sound & vibration analyser
- CUBE – Smart noise monitoring terminal
- ORION – Smart vibration monitoring terminal.

“Rent or Buy? It depends,” says Peter Shiels, Air-Met General Manager Product Sales & Development. “Since 2011, Air-Met has been selling 01dB equipment in Australia. But for some customers, the ability to rent (instead of buy) precision 01dB instruments is a real financial and non-financial advantage.”

“For some, it’s about keeping costs down without sacrificing access to world-class noise and vibration monitoring equipment for their project. For others, it’s the realities of a tight schedule or one-off monitoring event driving customers to find an easy-to-use but ready-now tool,” added Peter.

“The demand for 01dB instrument rentals has been consistently high,” commented Andrew Marom, Air-Met Rental Manager. “The most popular item from the 01dB product range is the DUO smart noise monitor which is extremely flexible and widely used across the construction and mining industries. The 01dB CUBE [smart noise monitoring terminal] is also popular, particularly in Victoria.”

“Typically, 01dB equipment renters are environmental consultants and occupational hygienists to construction sites, industrial plants and airports,” observed Andrew.

“Customer feedback has been very positive,” said Peter. “I’ve found that 01dB users appreciate the telemetry capabilities of the instruments allowing for access to real-time data instead of the traditional need to download the data after going back into the office. They also enjoy the connectivity of the instruments and the software.”

To rent 01dB equipment contact Air-Met Scientific on +61 (0)3 8878 3388 or visit www.airmet.com.au

01dB technical support and advice by Marshall Day Acoustics

When 01dB’s parent company, ACOEM Group merged with ECOTECH in 2017, a new tri-partied strategic relationship emerged between Air-Met, ECOTECH and one of the world’s largest and most respected acoustic consultancies, Marshall Day Acoustics.

When required, Marshall Day Acoustics can provide comprehensive technical support and advice to customers purchasing or renting 01dB instruments from Air-Met.

01dB equipment service & calibration by ECOTECH

The first of its kind anywhere in the world outside of Europe, in June 2018, ECOTECH opened a dedicated 01dB equipment service and calibration centre. The new 01dB centre will soon comply with the requirements of ISO/IEC 17025:2005; extending the range of NATA accredited facilities and services ECOTECH already provides.

For more information contact Horacio Viana, ECOTECH Customer Services Manager on +61 (0)3 9730 7800 or horacio.viana@ecotech.com 

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For some customers, the ability to rent (instead of buy) precision 01dB instruments is a real financial and non-financial advantage.
”



The Smith Family & ECOTECH: Together Providing Disadvantaged Students with Opportunities to Create a Better Future

Main pic (L-R): Donnette Rushworth, The Smith Family's Corporate Partnership Manager; Michelle Orr, ECOTECH People Development & Culture Lead; Jared, The Smith Family successful university graduate; Anton Leschen, Smith Family General Manager Victoria; and Nicholas Dal Sasso, ECOTECH Managing Director.

The Smith Family is an Australian, independent non-profit children's charity whose goal is to create opportunities for disadvantaged children and their families and encourage them to participate more fully in society, using education as a key tool.

ECOTECH is proud to announce a partnership with The Smith Family — Australia's largest children's education charity.

Building on a long history of providing work experience and cadetships at ECOTECH over many years, ECOTECH Managing Director, Nicholas Dal Sasso announced on 2 May that ECOTECH is investing in the education of disadvantaged Australian students from primary school right through to university.

"This partnership is also about improving the number of young people choosing to embrace Science, Technology, Engineering and Mathematics (STEM) – disciplines close to the heart and commercial success of ECOTECH," said Nicholas.

"Did you know, 75% of the current fastest growing occupations now need STEM skills? And typically, these occupations are dominated by students that come from

high socio-economic backgrounds.” explained Anton Leschen, The Smith Family General Manager Victoria.

Australia is facing a challenge in the future to compete on the international stage in STEM skills. By age 15, students from lower socio-economic backgrounds can be as much as three years behind students from more affluent families in mathematics, science and technology-based subjects.

“STEM is the life-blood of every advanced industry and economy. Our children are the life-blood of our collective futures,” commented Nicholas. “How appropriate then, through this special partnership between ECOTECH and The Smith Family, we can improve both the uptake of STEM and the opportunities for disadvantaged students.”

The Smith Family is improving the educational outcomes of disadvantaged children through their Learning for Life program.

Students on the program receive financial assistance for educational expenses directly into their family’s bank account. They also receive direct help from The Smith Family’s team and access to vital extra support such as mentoring programs and a special project coordinator.

Breaking the cycle of disadvantage means that children on the program are more inclined to move on to further education such as university or training, and as a result are highly likely to obtain a good job and start a meaningful career.

“I am delighted ECOTECH will partner with The Smith Family. It is something I and every ECOTECH staff member can be proud of,” said Nicholas.

To learn more about The Smith Family, and how you too can sponsor young people in need by providing access to The Smith Family’s Learning for Life education support programs, please visit www.thesmithfamily.com.au 

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Math] and the
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”



What Do an Acoustic Consultant, a Noise Monitoring Expert & an Air Quality Scientist Have in Common?

Main pic: 01dB FUSION™ Smart Sound & Vibration Analyser. The first sound level meter to offer completely wireless vibration measurement. Connect FUSION™ to a powerful vibration sensor and it will record and store 3-axis vibrations in parallel, audio signals and all noise indicators.

About Marshall Day Acoustics: Established in 1981, Marshall Day Acoustics has grown to become one of the world's largest and most respected acoustic consultancies.
www.marshallday.com

One of the world largest and most respected acoustic consultants, Marshall Day Acoustics joined environmental monitoring stablemates, 01dB and ECOTECH to exhibit together for the first time at Acoustics 2017.

Acoustics is the premier sound conference and exhibition in Australasia hosted by the Australian Acoustical Society. Acoustics is a must attend event for acoustic and noise monitoring professionals, government authorities and research agencies. Together, key manufacturers and suppliers of acoustic and sound-related equipment display the latest developments in noise and vibration control, monitoring products, acoustic instrumentation and software.

Together, ECOTECH, 01dB and Marshall Day Acoustics showcased their technical expertise and endorsement of 01dB noise and vibration monitoring instruments:

- FUSION — Smart sound and vibration analyser
- CUBE — Smart noise monitoring terminal
- DUO — Sound level meter and monitoring station
- ORION — Smart vibration monitoring terminal.

Combining the expertise of three environmental monitoring market leaders

“It was exciting to join ECOTECH at Acoustics Perth 2017” said ACOEM Asia’s Managing Director Patrice Pischedda. “Since forming the Environment division of the ACOEM Group with ECOTECH in 2017, o1dB and ECOTECH are creating new opportunities to work together to promote our collective range of environmental monitoring products and services,” he added.

ECOTECH’s Business Manager for Australia and New Zealand, Mark Brooks, recognises the obvious synergies that working closely with o1dB and Marshall Day will deliver to customers, such as enhanced technical support and streamlined service delivery. “This was ECOTECH’s first acoustics event with o1dB. Realising the compatibilities that exist between noise and air quality monitoring empowers us to create new and enhance existing solutions that better serve our customers changing environmental monitoring needs,” said Mark.

Marshall Day Acoustics presented two technical papers at the Acoustics 2017 conference, and Co-CEO Christophe Delaire together with Patrice Pischedda, they led a “noise and vibration monitoring with o1dB” workshop. The Marshall Day Acoustics team also featured acoustic cameras and their flagship software and hardware acoustic offerings, including:

- Sound Plan – An environmental software package offering a flexible range of noise and air pollution evaluation modules
- Iris – A powerful and user-friendly measurement system for capturing and analysing room impulse responses in 3D
- Insul – An intelligent software tool that predicts the sound insulation of walls, floors, ceilings and windows.

“The different but complementary products and services o1dB, ECOTECH and Marshall Day Acoustics can offer

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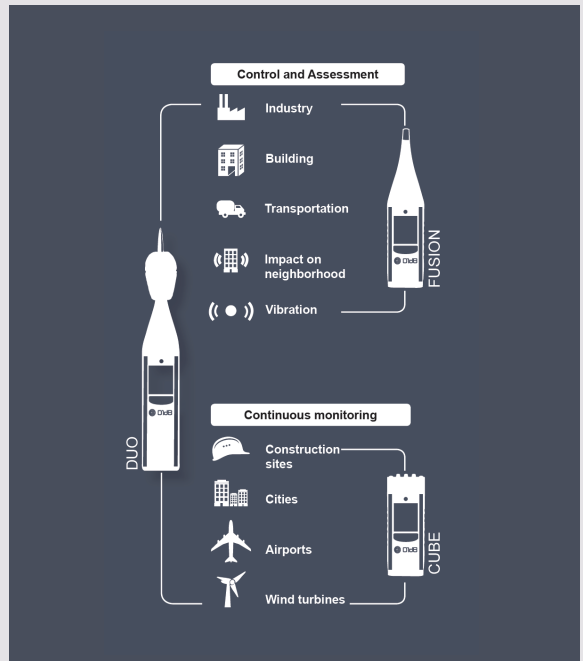
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Realising the compatibilities that exist between noise and air quality monitoring empowers us to create new solutions.”

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creates opportunities for our clients to find new value in specialised and interconnected environmental solutions we create together,” said Christophe.

For more information visit www.o1dB.com, www.ecotech.com and www.marshallday.com or look out for the next Acoustics event in Adelaide, South Australia, 6-9 November 2018. www.acoustics2018.com

“
o1dB and
ECOTECH are
creating new
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work together
to promote our
collective range
of environmental
monitoring
products and
services.”





Reduce your environmental impact

Together We Create Sustainable & Innovative Solutions that Shape the Future

A strong focus on sustainability and innovation shapes every ACOEM brand, including ACOEM Environment stablemates ECOTECH and o1dB. Around the world in 2018, ACOEM brands and its people are:

- Designing the future of mobility (METRAVIB DESIGN)
- Training machines to learn (ONEPROD, FIXTURLASER & MEAX)
- Enhancing global security (METRAVIB DEFENCE)
- Making cities smarter (ECOTECH & o1dB).

Together, ECOTECH and o1dB are creating solutions that will shape the future of smart cities.

Smart Cities need accurate, reliable and affordable continuous monitoring of infrastructure and industrial activities, including sensors for air pollution, particulate matter, and noise and vibration monitoring. High-quality measurement and functionalities allows cost-effective and integrated maintenance applications for Smart Cities. For more information visit www.acoemgroup.com 



Watch the 75 sec ACOEM Group 2018 video. Visit www.ecotech.com/wishing-you-a-sustainable-and-innovative-2018



Collaborative Air Quality & Climate Research Expedition Powered by ECOTECH Instruments

Main pic: The international research team in front of the "Kommandor Iona".

Image courtesy of the Max Planck Institute for Chemistry (MPIC).

The ground-breaking Air Quality and Climate Change in the Arabian Basin (AQABA) project assembled a dedicated international team to conduct critical research into the effects of air pollution in the region.

ECOTECH was proud to partner with some of the world's most respected environmental research institutions to study air quality and climate change on the AQABA expedition around the Arabian Peninsula, conducted over a 40-day period between June and August 2017.

Coordinated by Dr Jos Lelieveld, director of the Max Planck Institute for Chemistry (MPIC), Germany, and in collaboration with Dr Jean Sciare, Director at the Institute in Mainz, Germany and Professor at the Cyprus Institute, Cyprus, this major scientific collaboration included the:

- Cyprus Institute, Cyprus
- Kuwait Institute for Scientific Research (KSIR)
- University of Cairo (Egypt)



- Zayed University (United Arab Emirates)
- King Abdullah University of Science and Technology (Saudi Arabia)
- University of California San Diego (USA)
- National Center for Scientific Research (Laboratory for Climate and Environmental Science, France).

The expedition's ship, the Kommandor Iona, journeyed from Southern France across the Mediterranean, through the Suez Canal to Kuwait and back, covering approximately 20,000 kilometres.

The project's goal was to gain a better understanding of the influence of air pollution on the natural environment. It investigated the processes that determine the life cycle of natural and anthropogenic aerosols and oxidants, and looked at their role in air quality and public health, as well as impacts on clouds, climate and biogeochemical cycles.

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AQABA was the largest and most comprehensive atmospheric chemistry and aerosol consignment taken into the field on a ship to date.
”



Pic top: Measuring the aerosol phase function. Top of the range, Aurora™ 4000 Polar integrating nephelometer provides measurements of light scattering with up to 18 user selectable angular sectors using varied backscatter shutter positioning.

Pic above: Serinus® 60 NO₂ analyser with CAPS technology. Cavity Attenuated Phase Shift (CAPS) allows direct measurement of nitrogen dioxide, rather than an indirect calculation from a chemiluminescence analyser.

(Continued from page 21)

Creating a unique floating laboratory

The intense sunlight of the Arabian Peninsula during summer presented an ideal opportunity for highly active photochemistry. The diversity of air and climate within the geographical area meant that researchers encountered a wide spectrum of conditions:

- Moderately polluted conditions over the Mediterranean
- Pristine air around the Arabian sea
- Dusty air from Africa in the red sea
- Air polluted by urban outflow and ship exhaust fumes in the Middle East
- Air tainted by petrochemical emissions in the Persian Gulf.

ECOTECH supplied the expedition with the:

- Aurora™ 3000 Multi Wavelength Integrating Nephelometer
- Serinus® 60 Direct Nitrogen Dioxide Analyser
- Congrego® data acquisition system. Congrego® is a next generation data acquisition system designed by ECOTECH that will replace WinAQMS™ data acquisition systems.

The monitoring equipment collected data on the chemical composition of the atmosphere along the ship's route. It also provided essential data to support other ongoing research, including gas-aerosol interactions and studies on the atmospheric chemistry of dust, sea salt and other natural emissions interacting with air pollution from various sources.

“Precision monitoring instruments play an integral role in the success of projects like AQABA,” said Professor Jean Sciare, Director of the Energy, Environment and Water Research Center at The Cyprus Institute.

“ECOTECH’s involvement and ongoing collaboration with the scientific community is a testament to our shared vision of coming together to help identify and solve environmental problems,” he added.



Pictured: The AQABA expedition route indicating prevailing wind directions.

Image courtesy of MPIC.

Real-time monitoring and accurate data to affect change

AQABA was the largest and most comprehensive atmospheric chemistry and aerosol consignment taken into the field on a ship to date. The instruments detected aerosol particles and gases from the bow of the ship and for the first time, unmanned aerial vehicles (drones) were deployed from the vessel to collect data on the vertical structure of the lower troposphere, simultaneously and comprehensively characterising photochemical and aerosol processes.

Initial measurements from the AQABA expedition already indicate the critical impact air pollution is having on public health, nutrient cycles and climate change.

“ECOTECH is committed to working with research facilities and academia to help make a positive difference to our environment,” commented Felicity Sharp, Head of ECOTECH Europe.

“Having worked with Professor Sciare and his team on a number of occasions, we recognised that this was an important opportunity to contribute to a pioneering study that has the power to influence global environmental decision making in the future,” she added.

For more information about ECOTECH’s role in the AQABA project, or to learn more about how scientists around the world use ECOTECH monitoring equipment to help their research, please contact Felicity Sharp on +33 4 72 52 48 00 or felicity.sharp@ecotech.com 

“
Precision monitoring instruments play an integral role in the success of projects like AQABA.
”

Professor Jean Sciare
Director
Energy, Environment &
Water Research Center
The Cyprus Institute



ACOEM Environment Opens Office in Sweden

Main pic: ACOEM AB in Gothenburg, Sweden is home to ACOEM Environment's first office in the Nordic region.

Did you know the Nordic countries are a northern European geographical region. Also commonly referred to as Norden, the area includes Denmark, Finland, Iceland, Norway, Sweden, Greenland, the Faroe Islands, and the Aland Islands. These countries share a common historical and cultural identity.
Source: www.worldatlas.com

ECOTECH products and services are now available directly to Nordic customers, plus a range of complementary instruments from leading international suppliers.

ACOEM Environment is a special division of the ACOEM Group that unites two respected leaders in environmental monitoring – ECOTECH and o1dB – forming the first globally integrated offering of products and services across noise, vibration, air, dust and water pollution monitoring.

Servicing the needs of the Nordic region

In April 2018, ACOEM Environment opened its first dedicated office in the Nordic region – in Gothenburg, Sweden – to better meet the needs and expectations of ECOTECH customers across Denmark, Finland, Iceland, Norway and Sweden.

Although select ECOTECH products, such as the range of Serinus® gas analysers and Aurora® nephelometers have

been available in the Nordic region for over 20 years, customers throughout the region will now have access to the complete range of ECOTECH products and services, backed by the global resources of the ACOEM Group.

Local knowledge & global expertise

ACOEM Environment is particularly fortunate to have appointed Nordic environmental monitoring expert Mikael Ramström as Nordic Business Manager.

Mikael has had a long and committed career in the environmental monitoring industry with more than 30 years' experience. Starting in 1988 with Oleico AB, ECOTECH's distribution partner in the Nordic region (Oleico AB was acquired by Tillquist AB in 2013), Mikael has built a reputation for excellence in customer service and technical support.

His expansive background, especially with gas and particulate measuring equipment, also includes sales, operations, service maintenance, measurement and applications covering fixed ambient air stations, mobile units, drones and research.

Mikael possesses inherent knowledge not only of ECOTECH's suite of monitoring solutions, but also of the instruments that ACOEM Environment now distributes exclusively in the Nordic market for their partners, including:

- **Palas Fidas** fine dust monitoring systems
- **Magee Scientific** real-time measurement of black carbon aerosol particles in the atmosphere
- **Brechtal Manufacturing Inc** sizing, counting and determining the chemical composition of particulate matter
- **Cooper Environmental** continuous metal monitoring.

His expertise and intrinsic understanding of equipment from Palas, Brechtel, Cooper Environmental and Magee Scientific will ensure that customers benefit from an extensive range of ECOTECH and complementary products.

"I've enjoyed a 30-year business relationship with the Dal Sasso family and ECOTECH, one based on transparency, trust and mutual respect, so the opportunity to become

(Continued on page 27)



*Pic above: Mikael Ramström,
Nordic Business Manager,
ACOEM Environment.*

“
No other manufacturer in the Nordic market can compare when it comes to service and support of the instruments and systems it produces.”

(Continued from page 27)

a member of the ACOEM Environment team was very attractive,” Mikael commented.

“No other manufacturer in the Nordic market can compare when it comes to service and support of the instruments and systems it produces. The fact that ECOTECH is also the end-user and operational expert in the field is a distinct advantage to customers. I am looking forward to working with ACOEM Environment to help meet the environmental monitoring needs of the Nordic market today and well into the future,” he added.

The future of environmental monitoring in the Nordic region

While currently focussing on the air quality side of the business, Mikael is also looking forward to the addition of 01dB noise and vibration monitoring instruments to deliver an even wider selection of integrated environmental system solutions to his Nordic customers.

“We are very excited to welcome Mikael to the ACOEM Environment team,” said Felicity Sharp, Head of ECOTECH Europe.

“His close working relationships with customers, extensive local knowledge and passion for providing exceptional technical support will ensure that his transition into the role will be seamless,” she added.

The ACOEM Environment office is co-located at the ACOEM AB office in Gothenburg, Sweden. ACOEM AB has an established presence in the Nordic region developing, manufacturing and marketing FIXTURLASER and ONEPROD branded instruments and equipment.

For more information about Nordic environmental monitoring solutions visit www.ecotech.com/nordic or contact Mikael Ramström on +46 70 894 66 24 or mikael.ramstrom@ecotech.com 



Palas® Fidas® 200S



Cooper Environmental XACT® 625i

PALAS®

COOPER ENVIRONMENTAL

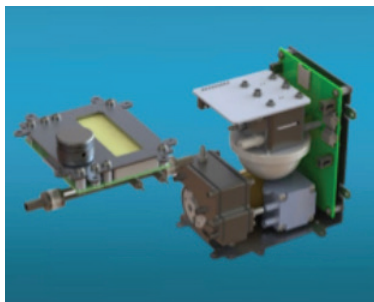
Aerosol

MAGEE SCIENTIFIC

BRECHTEL



Magee Scientific Aethalometer®



Brechtel ACCESS Single Channel Tricolor Absorption Photometer



*ECOTECH ACS 1000
Aerosol Conditioning System*



Main pic: ACOEM ECOTECH Industries Pvt Ltd Operations Manager, Paresh Gandhi leads by example.

Above: ECOTECH Industries Production and Warehouse staff member, Ms Poonam Dole learns how to use a fire extinguisher correctly as part of regular fire safety training at ECOTECH's manufacturing facility in India.



Safety Training Takes Centre Stage at ECOTECH in India

An intensive and highly informative fire safety training session late 2017 boosted safety standards at ECOTECH's manufacturing facility in Indore, India.

Led by ACOEM ECOTECH Industries Pvt Ltd Operations Manager Paresh Gandhi and conducted by a professional fire safety trainer, the fire safety training session provided 30 ECOTECH team members with hands-on training in the use of fire extinguishers for electronic and non-electronic based fires.

Fire safety training sessions are run at the ECOTECH facility on a regular basis and all fire extinguishers are replaced at mandated expiry dates. These stringent regulations help to ensure that the highest standards of safety are maintained at all times throughout the ECOTECH facility.

ECOTECH has a strong culture of risk management and a systematic approach to health and safety management. ECOTECH offices in Australia are certified to



“
**Safety is
ECOTECH's
highest
priority for our
employees.**
”

AS/NZS 4081 Occupational Health & Safety Management system independently audited by BSI Group.

ECOTECH Managers like Paresh consistently display Health, Safety and Environment (HSE) leadership by engaging with employees and other stakeholders about safety issues including regulatory compliance and site-specific obligations.

“Safety is ECOTECH's highest priority for our employees within the facility and at the multiple work sites we operate and maintain for our customers,” said Paresh.

“Practical training sessions like how to use fire extinguishers allow my staff to get involved and take ownership by identifying, assessing and mitigating safety hazards when they work,” he added.

To learn more about ECOTECH in India contact Manoj Kumar or Gautam Sakuja at india@ecotech.com or visit www.ecotech.com/india 

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TOGETHER
WE CREATE
SOLUTIONS
THAT SHAPE
THE FUTURE

TOGETHER

ECOTECH'S MAGAZINE ABOUT ENVIRONMENTAL MONITORING

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