



15 August 2016

Cutting edge project with US technology partner, Sigma Space

Relevant to the new win in South America and open cut mining operations globally, PEH is pleased to announce significant progress on developing a new capability in our technology set as a result of the Sigma Space partnership (announced to the ASX on December 15th, 2015).

Field trials of Sigma's Mini Micro-Pulse LiDAR (MiniMPL) remote sensing technology have been conducted in Australia and indicate the feasibility of integrating this method with EnviroSuite to provide additional information on real-time dust source activity on large sites where filling in the large gaps between standard monitoring sensors can bring about significant improvements in environmental management. The MiniMPL is an innovative low-energy, fast detection LiDAR technology.

The ability to integrate remote sensing with traditional 'single-point' sensors in EnviroSuite is considered to have significant commercial potential across applications that involve multiple, distributed sources of dust or particle emissions, such as mining, bulk handling, construction, agriculture and urban air quality management.

Comment from Damon Roddis, Pacific Environment's National Air Quality Practice Leader

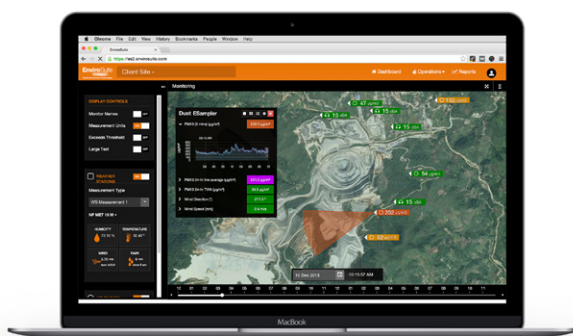
"The success of the project is testified by the Australian Coal Association Research Program (ACARP) which has contributed extensively, recognising the potential strength of the development when applied to dust monitoring in the mining sector. Mining is our primary target for this technology and ACARP has provided funding to complete the research and development, so the sector is very interested in mining applications for the MPL."

"We're also now demonstrating the technology at the Port of Newcastle because we believe that ports, along with other geographically dispersed emission sources, are a primary target for this technology."

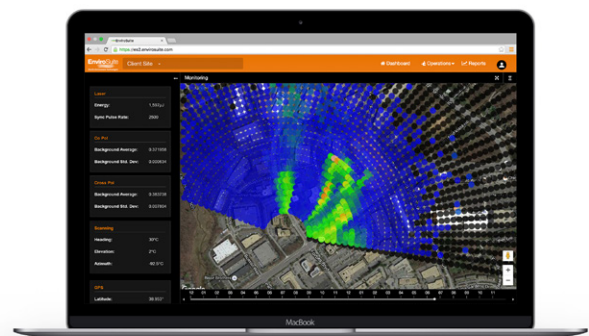
Comment from Justin Fisher, Director Atmospheric LiDAR Products at Sigma Space Corporation

"Sigma Space is pleased that the MiniMPL trials conducted by our collaboration partners Pacific Environment are showing the unit's utility as an operational tool for environmental dust management. This work shows another important application of Sigma Space Corporation's technologies and we look forward to further developments from the current work that will enhance our companies' mutual standing in the global environmental market."

The EnviroSuite monitoring module with traditional sensors versus the MiniMPL



Traditional sensor



MiniMPL

Sydney

Melbourne

Brisbane

Adelaide

Perth

About Lidar Technology

Lidar is a remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light. Micro Pulse Lidar (MPL) is a sophisticated laser remote sensing system that provides continuous, unattended monitoring of the profiles and optical properties of clouds and aerosols in the atmosphere. Based on the same principle as radar, MPL transmits laser pulses that scatter (reflect) off particles in the atmosphere. MPL then measures the intensity of backscattered light using photon-counting detectors and transforms the signal into atmospheric information in real time.

MPL Technology can enhance air quality and meteorological monitoring, improve emissions models and inventories, optimise aviation safety through enhanced cloud and volcanic ash profiling, and help improve wind pattern forecasts for site evaluation and management.

About Sigma Space

Established in 1998, Sigma Space Corporation produces next-generation lidar, laser ranging, spectroscopy, and radiometry instrumentation for remote sensing. Sigma Space offers advanced science and engineering services to private and government clients, including NASA and the US Department of Defense.