

Electromagnetic (EM) Services

The electromagnetic (EM) field method typically involves the generation of an electromagnetic field into the earth to measure the response of the induced secondary field signal. There are two main types of EM method: time domain electromagnetics (TDEM) and frequency domain electromagnetics (FDEM). TDEM instruments measure the decay time of the induced field signal whereas the FDEM method measures the amplitude and the phase of the EM signal. EM data is used to determine terrain conductivity and the presence of metal and is capable of detecting both ferrous and non-ferrous materials in the subsurface. This is important in environmental projects, where detecting changes in conductivity and the presence of metal is critical.



THE Applus+ SOLUTION

Applus+ provides clients with professional EM services and real-time results that can facilitate site characterisation. We are able to use EM services in conjunction with other geophysical services to create a thorough subsurface-investigation package. Combining EM services with complementary services such as ground penetrating radar is often valuable from an environmental perspective.

Clients who partner with Applus+ for their EM services will gain:

- Rapid data acquisition and processing
- The chance to interface directly with GPS for the real-world positioning of results
- Advanced data processing
- A package of complementary geophysical services
- Environmental site assessments
- Engineering support

Applus+ geophysicists can design surveys that are tailored to the specific needs of each client, providing timely and accurate data in a professional report.

Target customers

Electromagnetic services provide a fast and reliable way of quickly ascertaining subsurface information. Engineers and construction firms can benefit from an EM survey. EM data can help determine the presence of subsurface metal (utilities or underground storage tanks, for example). It also can detect changes in soil conductivity and changes in subsurface properties such as water content or contamination in the subsurface.

Key customer benefits

With its highly trained personnel and the most advanced software on the market, Applus+'s advanced EM services offer site-characterisation solutions to a range of specialist environmental and engineering problems.

Our EM method allows for rapid and accurate data collection and processing, thereby increasing both the productivity and cost efficiency of our clients' projects.