

## **Fauske & Associates, LLC Offers LIRA® Portable Cable Testing Services and Products**

*Fauske & Associates, LLC (FAI), a wholly owned subsidiary of Westinghouse Electric Company, LLC, today announced a business arrangement with Wirescan to offer Wirescan's LIRA® Portable cable diagnostic and monitoring testing system for North American nuclear power plants and facilities. Through this arrangement, both companies will provide LIRA testing services. FAI will also market and sell LIRA units in North America.*

Burr Ridge, IL ([PRWEB](#)) April 17, 2013 -- Electrical cables provide many functions, including connectivity, instrumentation power, transmission and distribution of electricity. The electrical conductor typically made of copper or aluminum is the medium in which the electrons (electricity) are transferred for the intended cable function. Surrounding the conductor is the insulation, a key component that contains the electrons and separates the conductor from the outside world. Many cable designs have additional components, such as exterior screens and jackets.

During normal operations, cables are the conduit for the transfer of electrons. The following are common sources of damage that can quickly accelerate cable degradation:

- Mechanical fatigue, insulation cuts and dings caused by human or other interactions, such as poor installation of cable splices or splice degradation
- Chemical reactions, such as interactions with some chemicals found in soil for buried cable installations
- Biological interactions, such as damage caused by rodents that gnaw on cables
- Adverse local environments (ALEs), such as high temperatures, water/humidity/steam and (if in a nuclear environment) irradiation.

To reduce downtime and better maintain cable assets, many commercial nuclear plants include condition monitoring (CM) of their cables as a key element of the site cable management program to support license renewal and long-term operation.

The LIRA CM testing method offers several significant benefits over other existing CM evaluation methods. The LIRA CM method:

- Locates specific local degradation/faults and assesses overall cable condition
- Tests all cable sizes, from low- and medium-voltage cables to the high-voltage cables used in the transmission and distribution industries
- Accommodates both shielded and unshielded cables
- Uses a very low-voltage signal (5 DC or less) for all evaluations – so the test is a damage-free methodology
- Does not require decoupling of cables/terminations in the far end
- Uses or Has a short test time – less than five minutes (evaluation can be done elsewhere later)
- Tests inaccessible/buried/underground cables
- Tests cables up to hundreds of miles long

Based on transmission line theory, LIRA calculates and analyzes the changes in the cable's electrical properties (e.g., line impedance) as a function of the applied signal for a wide frequency band. LIRA applies a 5 VDC (peak to peak) radio frequency (RF) sweep to the cable between any two metallic cores (e.g., conductor and