



Trenchless Technology Center Newsletter

September 1996

Down Under Down Under

TTC director Ray Sterling has spent part of the past 12 months acting as a Visiting Fellow at the Warren Centre for Advanced Engineering at the University of Sydney, Australia.

Dr. Sterling was invited to help lead a project looking at underground space use in urban areas in Australia and made three visits there over a 9-month period. His last visit was in June-July during which time he wrote a summary report for the project, presented lectures in major Australian cities and was interviewed extensively by the media.

Although Australia has a low overall population density, it is a highly urbanized country and has strong community pressures to maintain high environmental standards. This is leading to a current boom in tunneling projects in Sydney, Brisbane, Melbourne and Perth. Whether new cabling for cable television should be above or below ground is also an issue of major controversy in Australia at the moment.

The study involved more than 100 people in 10 working parties including many executives of engineering

and contracting firms, lawyers, financiers, architects and planners. The final report titled "Underground Technologies for Liveable Cities" was planned to be available at the end of August. The major recommendations of the study are for:

- Planning efforts to be launched in each of the major Australian cities to assess geological conditions and existing structures to integrate this information with future city goals to plan for underground uses in the same way that surface uses are planned.

- Legislative and administrative action to harmonize legal and regulatory issues with regard to ownership of the underground, building codes and zoning regulations, contractual practices for underground construction and liability issues.

- An R&D initiative aimed at advanced techniques for site investigation in urban areas coupled with improved database structures and visualization techniques that will facilitate underground planning, design and construction.

800 Number for Trenchless Inquiries

The TTC in conjunction with its advisory board has decided to establish a toll-free number for general inquiries about trenchless technology. Callers will be able to request general publications on trenchless technology and be directed toward further sources of design, specification and construction information.

The new number is (800) 626-8659 and is in effect immediately.

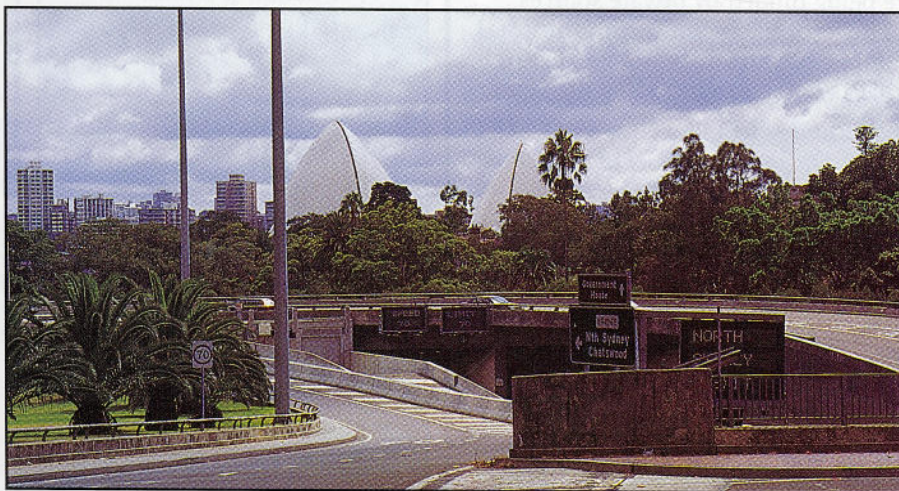
Advancing Trenchless Technologies in the Marketplace

A memorandum of understanding (MOU) has been signed by the Civil Engineering Research Foundation (CERF) Highway Innovative Technology Evaluation Center (HITEC) and the TTC to further the cause of research, development and evaluation of trenchless technologies.

The HITEC evaluation process was designed to ease the difficulties faced by new product and process innovators in getting their products accepted by the thousands of jurisdictions necessary for nationwide sales. In the process, the developer of an innovation enrolls in the program, then an expert panel involving representatives of typical user groups, consultants and research expertise is convened to review the innovation and establish a test program for evaluation.

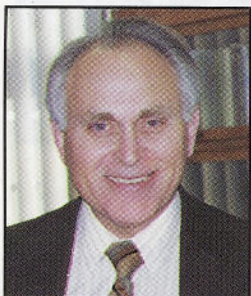
After the test program is conducted, the panel reviews the results and prepares a report that can be distributed to all potential users. The innovator saves time and money in the review process and can use the expertise of a nationally assembled expert panel.

The MOU extends the HITEC program into the trenchless technology field and CERF and TTC will cooperate on evaluations for trenchless technologies. For more information, contact the TTC or HITEC director Peter Kissinger at (202) 842-0555; fax (202) 789-5345.



The Sydney Harbour Tunnel was one of the first major urban road tunnels in Australia. The immersed tube tunnel passes just beside the famous Sydney Opera House. In the past few years the number of urban tunnels for road and rail projects has increased dramatically.

New Research Is Funded



Dr. W.T. Straughan, professor in Louisiana Tech's department of civil engineering, heads up several TTC research projects and is the principal investigator for the CIPP buckling test project.

In addition to the two research projects related to pipe bursting discussed in the last newsletter, the TTC has received several new research project awards. These projects include:

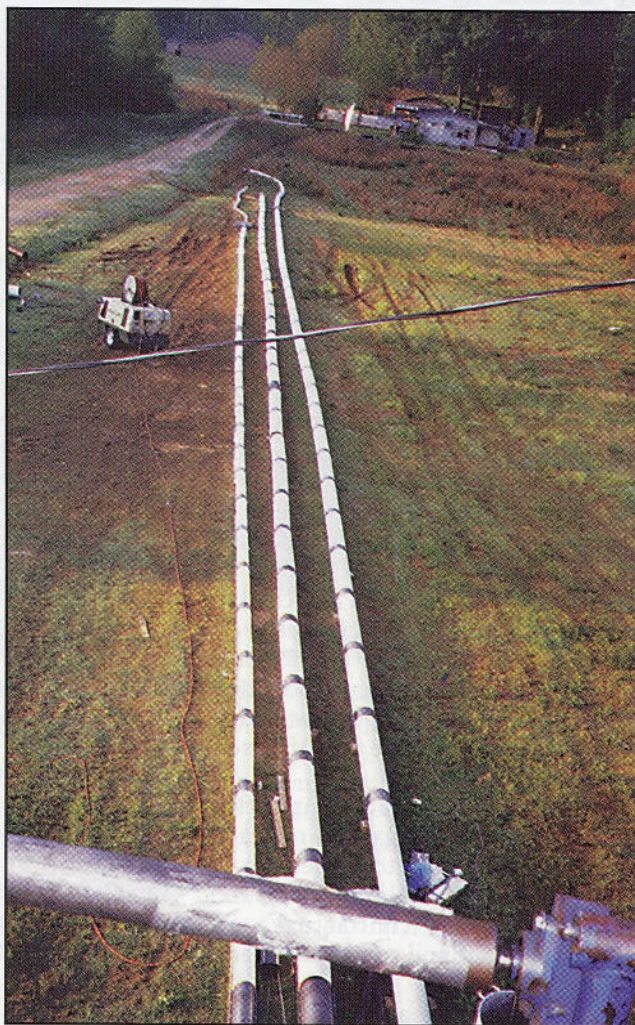
- Causes and Duration of Secondary Consolidation: Possible Insights from Geotechnical Centrifuge Experiments — a Transportation Innovation for Research Exploration (TIRE) award, funded by the Louisiana Transportation Research Center.

- Exploratory Research Into the Feasibility of a Small-Scale Wireless Embedded Soil Displacement Sensor—a Transportation Innovation for Research Exploration (TIRE) award, funded by the Louisiana Transportation Research Center.

Recent Research Proposals

The TTC has been active in submitting many research proposals in the past nine months. These proposals have been directed to the Gas Research Institute, the Louisiana Educational Quality Support Fund, the Louisiana Transportation Research Institute, the City of Baton Rouge, La., and several industry firms.

The center also participated in a proposal with Roy F. Weston, Inc. to the American Water Works Association



Test CIPP pipe sections being lined at the TTC Test Facility in early May for a state-funded project on the development of an analytical procedure for the design of CIPP liners. Principal investigator is Dr. W. Tom Straughan.

- In addition to the above there are four other new research projects that are being funded by private sources.

These projects will bring the total number of currently active research projects being conducted by the center to 10.

Research Foundation (AWWARF). The evaluation of some of these proposals is still in progress, but work is either under way or in preparation on three new projects.

A proposal to the Gas Research Institute (GRI) for encroachment of right-of-way detection reached the final four to be considered but further evaluation has been put on hold due to cutbacks this year in the program at GRI.

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Peninsula, Ohio

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Auburn, Ala.



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