

# Keyhole Technology Newsletter

A newsletter exclusively for research collaboration participants and partners of the Keyhole Technology Project

## Research and Development Priorities Matrix

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Keyhole technology has reached a crucial juncture in its development where many exciting ideas have come to fruition. Tools and procedures for locating, service installation, cathodic protection and leak repair have been developed and used in the field. At the September 11<sup>th</sup> meeting of keyhole project participants, a keyhole matrix was constructed to discern keyhole priorities of the project members. The majority of responses to the matrix have been received. The final results will be e-mailed to all participants. This newsletter contains the highest ranking matrix results to date.

Once all results are in, the next steps in the process of keyhole project definition are:

- Gap analysis: Of the top priorities, which already have solutions? Which are already being addressed in other GTI projects?
- Utilities process assessment: Those processes selected for development must be researched for current (non-keyhole) procedures
- Vendor and manufacturer availability must be assessed.

If anyone has input on the keyhole priorities listed, please contact Dennis Jarnecke or Angie Wood at GTI. All contact information is on the newsletter's back page.



**Keyhole Technology  
Collaboration  
Project**

### The new Keyhole Newsletter will:

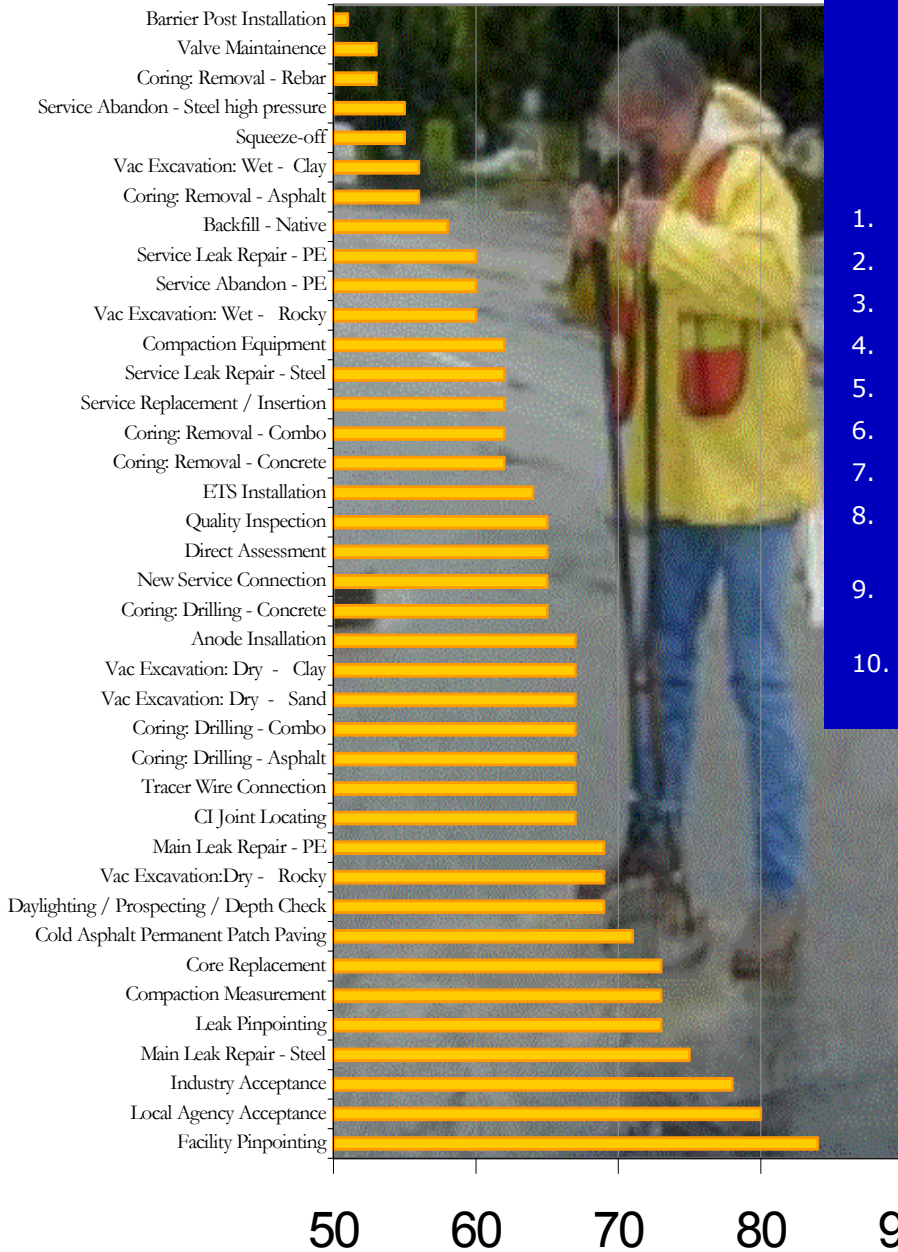
- Introduce new project participants—their expertise and concerns.
- Present current GTI research developments
- Highlight innovative keyhole products and their vendors

## Tool Standards To Be Investigated



The formulation of a keyhole task group is proposed to guide the effort of tool standardization for the keyhole project. The task group will consist of 4 or 5 of the keyhole project participants (volunteers). These members will draw upon their field experience and knowledge to define and highlight key issues of the tool standardization process. The final goal of the task group is a set of specs that can be distributed to manufacturers. Please contact Dennis Jarnecke or Angie Wood if you are interested in participating in the Standardization Task Group.

# MATRIX PRIORITIES



MAIN AREAS OF INTEREST  
AS A PERCENTAGE

## Top Ten Reasons

Why  
You Want to  
Investigate Keyhole  
Technology

1. Facility Pinpointing
2. Local Agency Acceptance
3. Industry Acceptance
4. Main Leak Repair - Steel
5. Leak Pinpointing
6. Compaction Measurement
7. Core Replacement
8. Cold Asphalt Permanent Patch Paving
9. Daylighting / Prospecting / Depth Check
10. Vac Excavation: Dry - Rocky

## Your Newsletter

The new *Keyhole Technology Newsletter* will present new tools, update research reports, and introduce new research collaboration participants. The newsletter will be sent exclusively to Keyhole Technology Research Collaboration Project participants. Please share it within your organization. If anyone in your organization — field superintendents, engineers, technicians for example—would like their own copy, please send their names and mailing addresses to Angie Wood of Gas Operations. Any content suggestions, contributions, or corrections would be graciously appreciated.

## Peter James from PLCS visits GTI labs

Peter James, Vice President of PLCS, and Eddie Ellis, Technical Representative from PLCS, visited GTI's Gas Operations laboratories on October 15, 2002. PLCS develops equipment for gas pipeline repair, renovation, and installation. Dennis Jarnecke of GTI presented GTI's current research on Keyhole Technology and explained the upcoming projects. Peter James indicated his interest in developing and demonstrating cast iron joint location techniques and joint sealants through keyhole methods. The Keyhole Technology Research Collaboration binder will be updated with information from PLCS shortly. Mr. James showed great interest in collaborating on the Keyhole Research Technology project.

Presently PLCS applies keyhole techniques to two of its repair processes: Encapsulation and Anacure. PLCS Encapsulation is the leading cast iron pipe polyurethane repair. Anacure is an anaerobic sealant, directly injected

into each joint. The PLCS Flex-kit is for use in small hole excavations created by a vacuum excavator. The joint is cleaned using a grit blast lance and primer is applied remotely, with one wipe priming the pipe surface and the bell face. The mold is lowered into place using a fill tube. The pre-installed bands are located with a hook tool and tightened by using a remote air ratchet. The sealant is poured down the fill tube, which is then removed. A pressurizing piston cap is installed onto the neck of the mold to complete the encapsulation. The whole operation is conducted from the road surface using long handled tools.

PLCS is based in New Jersey and has a website, [www.PLCSUSA.COM](http://www.PLCSUSA.COM). Peter James can be reached at [peter.james@PLCSUSA.com](mailto:peter.james@PLCSUSA.com) and (856) 722-1333.



## Mississippi Valley Gas joins Keyhole

Mississippi Valley Gas has joined the Keyhole Technology Collaboration Project. Mr. Eddie Johnston will be MVG's project coordinator. He can be reached at (601) 961-6788 and [johnstoe@mvgas.com](mailto:johnstoe@mvgas.com). MVG is the Mississippi's largest gas utility. It serves about 261,500 Mississippi customers in 144 communities throughout 36 counties. Residential customers account for 89 percent of the utility's customer base and for 46 percent of its revenue. Jackson is the largest urban area served, with about 30 percent of the utility's customers located there. The utility's fastest-growing community is Southaven, a suburb of Memphis, Tenn. Mississippi Valley Gas operates a 5,500-mile distribution system and 335 miles of transmission pipeline. The utility owns two underground gas storage facilities at Amory and Goodwin in northeast Mississippi, with a combined working gas capacity of 2.05 billion cubic feet.



*Mississippi Valley Gas joins Collaboration.*

## MichCon joins Keyhole Collaboration

MichCon joined the keyhole research collaboration project in September. Part of DTE Energy, MichCon is headquartered in Detroit and services about 1.5 million gas and 3.5 million electric customers in the state of Michigan. They maintain three major storage fields throughout the state and service portions of the lower peninsula and upper peninsula. Mike Arioli, Gas Distribution Supervisor, will be the contact person. His email is [ariolim@dteenergy.com](mailto:ariolim@dteenergy.com).

MichCon currently have two "cookie cutter" trucks used in conjunction with 1x1 trucks. No added personnel are needed to run them. Keyhole activities performed by MichCon are service cutoff, cast iron and steel main repair, cathodic protection and service renewal.



*MichCon joins.*

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## Contact List Updates

This portion of the newsletter will contain updates to the Keyhole Technology Research Collaboration Binder that was supplied to all participants at the September 2002 meeting. If you have any updates or corrections to the Collaboration binder please send the information to:

[Angie.Wood@gastechnology.org](mailto:Angie.Wood@gastechnology.org)

### Research Collaborators Contact Update List:

1. Gunther Prattinger replaces Bill Castellan at Enbridge
2. Gerry Adkins replaces Kelly Kinnett at ONG (Oklahoma Natural Gas)

### Collaborators Contact Update List:

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Lycofit Mechanical Tapping Tee made by Lyall.

## Jeff Lyall of R.W. Lyall visits GTI Tracer Wire Connection Developments

Jeff Lyall of R.W. Lyall & Co, Inc. visited GTI in late October. R. W. Lyall is a leading manufacturer of piping distribution products for the natural gas and LPG industries headquartered in Southern California. They specialize in couplings, fittings, risers, meter sets and other distribution products. Jeff Lyall, President of R.W. Lyall, is very interested in meeting the keyhole needs of the gas industry. Lyall indicated that they are investigating development of keyhole tools to install their fittings through small holes. He also expressed interest in developing the tooling required to make tracer wire connections through a keyhole; a necessary step when installing new PE services. Look for more updates on the tracer wire tooling development in future news letters. Further information on R.W. Lyall & Co, Inc. is available on their website: [www.rwlyall.com](http://www.rwlyall.com).