the Energy to Lead

Keyhole Technology Consortium Program

Fall 2012 Meeting

> November 13 & 14, 2012
> Washington Gas
 – Springfield, VA

gti.

Keyhole Technology Program

> **Sign-in Sheet**

> **Confidentiality Statement**

– The individuals, and the entities that they are representing, agree that all information which they receive from any other participant at the meeting will be held in confidence, will not be published in any form, and will not be discussed with or disseminated to any other individual or organization outside of this meeting, except for those with a need to know in their own organization.

> **Antitrust Guidelines**

– You must avoid any discussions or conduct that might violate the antitrust laws or even raise an appearance of impropriety.

gti®

Keyhole Technology Program

> Welcome and Introductions
- Overview of facilities

  > Guests include: Advanced-Tec Materials, Peoples Gas, UGI, GDF Suez, Virginia Natural Gas, NPL, Miller Pipeline, PG&E, Tracto-Technik, Super Sucker Hydro, and UPSCO

- Sign-in sheet

gti.

Keyhole Technology Program

> Welcome and Introductions
  - Member introductions
    > Your name and company
    > What activities and/or interests do you have in the area of keyhole?
    > What actions or knowledge are you looking to take from this meeting?
      - May include addressing issues, needs, the sharing of information, etc.

gti.

Keyhole Technology Program

> Review Agenda
>> – Any comments on agenda?
>> – Any additions to agenda?

gti.

Keyhole Meeting Spring 2012

> Discuss times and transportation for dinner

Geranio (in Old Town Alexandria)

722 King St.

Alexandria, VA 22314

703-548-0088

Meet at Hilton Springfield for happy hour at 6 pm

Meet in Lobby of Hotel at 7 pm to travel to Dinner!

Dinner supported in part by **TELLUS** UNDERGROUND TECHNOLOGY, INC.

gti

Keyhole Meeting Spring 2012

> **Your Participation** is critical to making both the meeting and the keyhole program efforts a success!

This

Not this!

gti

Keyhole Program Mission & Priorities
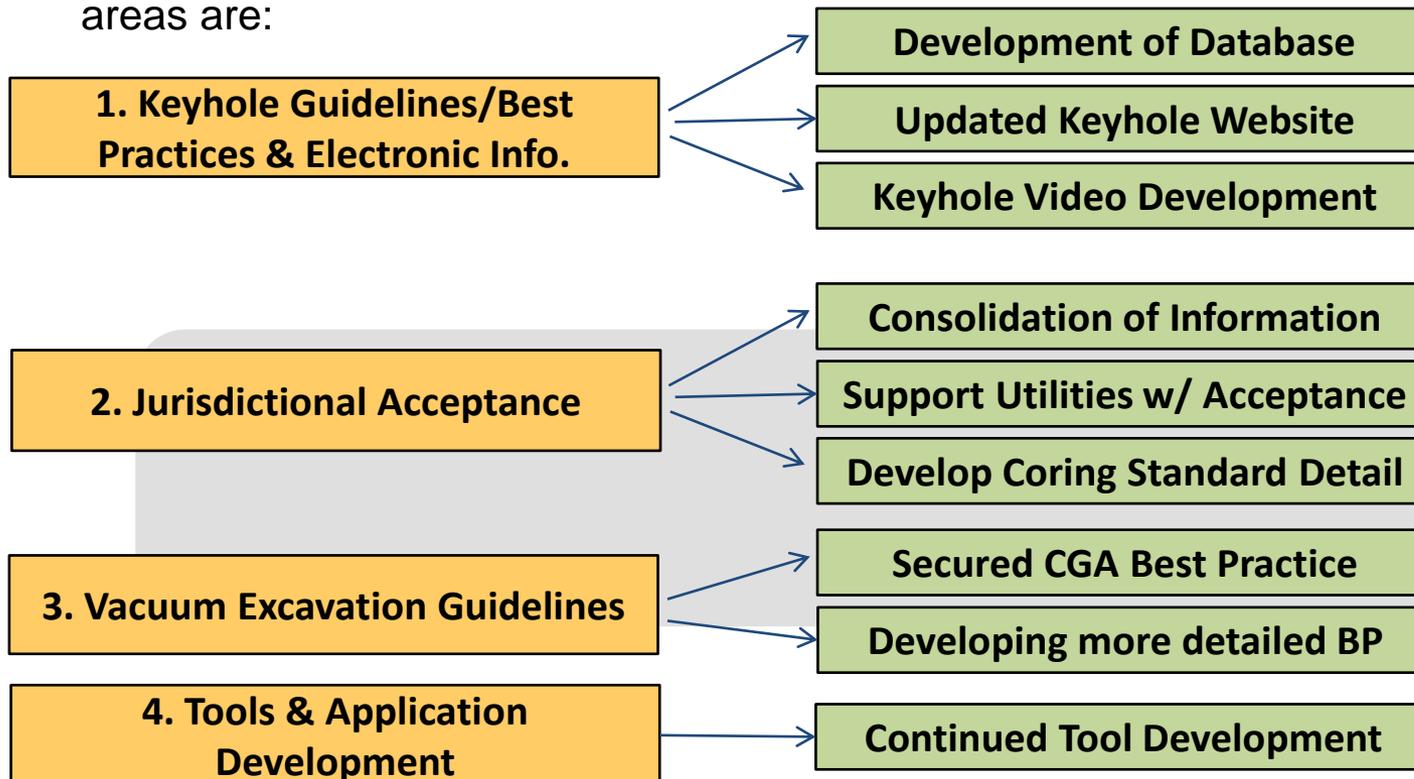
> ## Program Vision

The program goals are to continue to provide value and share ideas with the stakeholders and to contribute to the acceptance and advancement of keyhole technology through:

- **Focus on customer needs:** Build strategy teams from the participating utilities, industry, and GTI to define the research and development needs and to guide the development and activities of the program focus areas.

- **Promote the use of the technology:** Establish and document procedures and gain acceptance by various jurisdictions (owners of the ROW).

- **Marketing and Implementation:** Provide training and establish guidelines and best practices for these applications.

- **Provide technical solutions:** Develop tools and new applications for various gas operations and maintenance work.

gti

GTI Keyhole Program Focus Areas

> **Priorities**

The program has targeted four focus areas that have been identified from current research and through surveying the industry and participating utilities. These focus areas are:

1. Keyhole Guidelines/Best Practices & Electronic Info.
- Development of Database
- Updated Keyhole Website
- Keyhole Video Development

2. Jurisdictional Acceptance
- Consolidation of Information
- Support Utilities w/ Acceptance
- Develop Coring Standard Detail

3. Vacuum Excavation Guidelines
- Secured CGA Best Practice
- Developing more detailed BP

4. Tools & Application Development
- Continued Tool Development

gti

Communication Tools

The following list contains the email addresses that have been created. In order to communicate with any of the groups, all you need to do is to type in the email address of the group with whom you wish to communicate and press send.

group@gtikeyhole.com   Sends email to all members of the keyhole program

utility@gtikeyhole.com   Sends email to all utility members of the keyhole program

manuf@gtikeyhole.com   Sends email to all non-utility members of the keyhole program

gti

Other Electronic Information

> www.gtikeyhole.com

> Various keyhole related information is available on this site. Most of this is public information to assist in advancing the technology.

gti

Keyhole "how to" Videos

Based on discussions at the last keyhole meeting (Spring 2012) and your requests…

> GTI has been developing various keyhole "how to" videos to assist with the understanding and implementation of the technology.

> Review some of the videos throughout the duration of the meeting.

– What do you like and dislike about the videos?

– What else do you want to see?

– New Video ideas?

– Review team?

gti®

Washington Gas' Keyhole Program

What is Needed for Successful New Technology Implementations?

Technology	Champion	Mgt. Commitment	Resources	Procedures	Training	Implementation	Measure

> **While change is difficult, properly preparing your staff for the change by providing good communications, training, and support are key to a successful implementation.**

> From your experiences…

- What works?
- What does not work?
- What is needed?

gti

Various Implementation Comments

> The technology has been developed, equipment was purchased and strategically deployed. Sustainability is the problem unless there is a Driver. The Driver(s) is different for each company.

> Increased work load in our territories and department has put a strain on the ability to implement and support. Budget restraints have also impacted the process.

> Contractor crew availability and pricing has an impact.

> Dedicated crews are needed to embrace and become experts on the new equipment.

> Training to support the technology.

gti®

Implementation Obstacles

1. Lack of Management Support
   - This is by far the most significant obstacle.
   - Management must be willing to commit the time, money, and other resources to make it work.

2. Lack of End User Support
   - The users must be willing to put in the effort to make it work.
   - Possible reasons for resistance include:
     - > Fear of learning a new product
     - > Being pushed out of one's comfort zone
     - > Dislike of the product chosen
     - > Remember past technology integration projects that failed.

gti.

Implementation Obstacles

3. Under-funding the Implementation
   - Also known as "doing it on the cheap"
   - Must commit to the time and money to properly plan, train, and support the implementation efforts

4. Underestimating the Effort Involved
   - The entire company must understand the effort required to integrate the technology
   - Communication is key

5. Selecting the Wrong Implementation Partner
   - Can be in-house staff or outside vendor (if you do not have the luxury of dedicated resources for an implementation team)

gti

Implementation – Keys to Success

> Involve your staff and as much of the organization as possible
  – Important to get involvement as soon as possible.
  – You may be excited about the new technology but your staff may be quite anxious.

> Create excitement
  – Plan a kick-off meeting which includes:
    > Technology overview
    > Benefits (don't forget what is in it for me)
    > Preparation activities
    > Training plan
    > Timeline

> Training
  – Training prior to and throughout the effort
  – Repetition is important – hands on both simulated and actual field jobs

gti

Round Table Discussions

> What are you doing in the area of keyhole?

> What are your needs or issues?

> Your recent accomplishments / success stories

> New tooling and equipment?

> Etc.

gti

Implementation of New Technologies

> Understand that hurdles and obstacles you may encounter with implementing something new.

> Successes and challenges with implementing new construction practices with contract crews and with internal crews.

> Various presentations / discussions from contractors and utilities regarding new construction techniques.

gti.

Coating and Wrapping in Keyholes

> Evaluation update and discussions

gti®

Various Manufacturer Presentations/Demos

> Indoor and outdoor presentations and demos
   – Tellus Underground
   – Utilicor
   – Kravitch Machine
   – Others

> GIROW Update and discussions

gti

Keyhole Group Dinner

Group Dinner:

Geranio (in Old Town Alexandria)
722 King St.
Alexandria, VA 22314
703-548-0088

Meet at Hilton Springfield for happy hour at 6 pm

Meet in Lobby of Hotel at 7 pm to travel to Dinner!

Dinner supported in part by

gti

Keyhole Meeting – Day 2

> Review Day 1 activities

> Utility only round table discussions

gti.

Implementation of New Technologies (cont.)

> Understand that hurdles and obstacles you may encounter with implementing something new.

> Successes and challenges with implementing new construction practices with contract crews and with internal crews.

> NPL presentation regarding new construction techniques.

gti.

Keyhole Efforts in Europe

> GERG, the European Gas Research Group
> - Update by GDF Suez on the efforts being taken in Europe regarding keyhole technologies

> Tracto-Technik update on keyhole efforts in Europe

gti.

Coring Jurisdictional Approval

> Questar Gas' recent efforts to support the acceptance of Keyhole coring
  - Demonstration at Local APWA and ASCE chapter meetings.
  - Demonstrations and information sharing to various cities and DOT.

> Other efforts?

> What else is needed to support acceptance.

gti.

Various Manufacturer Presentations/Demos

> Indoor and outdoor presentations and demos
  – Jameson – Gas Line Tracer System
    > Existing system to locate PE services
    > New system for PE mains

  – TT Technologies
    > Splitting PE pipe demonstration
    > Update on the keyhole HDD unit

Training and Education

> How are you currently training your crews, contractors, and city/state inspectors?

> Review training and implementation needs

gti

Keyhole Guidelines/Best Practices

> Electronic database review

> Encourage its use and feedback is needed to make it better.

gti.

AEM Vacuum Safety Video

> Purpose:
> > To provide best practices and training to reduce potential misuse and accidents that can occur during all applications and operations of vacuum excavation equipment.

> Scope:
> > The video is to address the potential hazards specific to vacuum excavation.
> > > Vacuum excavation is defined as a means of soil extraction through vacuum when using pressurized water or air for breaking ground.
> > > Resources include:
> > > > CGA Best Practices
> > > > Equipment Operator's Manuals
> > > > WJTA Recommended Practices
> > > > GTI Studies and research materials
> > > > Industry standards and regulations

> Audience: Owners, management, supervisors, trainers, operators, and users of vacuum excavator equipment.

> Mission: To encourage the proper and efficient use of vacuum excavation equipment that protects the user, the public, and property.

gti

Vacuum Excavation Best Practices

FINAL

VACUUM EXCAVATION BEST PRACTICE & GUIDELINE

GENERAL DOCUMENT

Gas Technology Institute
1700 S. Mount Prospect Rd.
Des Plaines, Illinois 60018
www.gastechnology.org

gti

Development of Future Initiatives

> Brainstorming and discussions
  - Keyhole Outreach/Promotion
    > Case Studies, additional markets, and other awareness efforts

  - Identify needs and issues to address

  - Support/Develop Equipment and Tooling
    > To support service/main installations and renewals
    > Other needed keyhole activities

gti.

Keyhole Technology Program

> Upcoming Events

> Next meeting planning

> Renewal of keyhole memberships

gti.

Keyhole Technology Program

Thank you all for you input and discussion points!

gti.