Checklist of Installation Steps

Steps

1. Store sensing cables properly
2. Hold a preconstruction meeting to clarify roles and requirements
3. Prepare for the installation and schedule it at the proper time
4. Install and test the TraceTek alarm module
5. Verify that all major construction is complete
6. Prepare the area where the sensing cable will be located
7. Test sensing cable before installation
8. Observe proper precautions when handling sensing cables
9. Install sensing cable in accordance with instructions for the application
10. Test sensing cable after installation
11. If using bulk sensing cable, have connectors installed and tested
12. Complete the leak detection system and activate it as soon as possible
13. Verify that the system is operational
14. Prepare as-builts, and have TraceTek system tested, mapped, and commissioned
15. Train owner/operator
For details, these general instructions refer to other nVent literature which is identified by an H-number. Consult nVent at (650) 216-1526.

### Installation Steps

**STEP:**

1. **Store sensing cables properly.**
   - Store the sensing cable in the original container in a clean, dry area prior to installation.
   - **FOR DETAILS REFER TO:**
     - All applications
       - Sensing cable installation instructions
         - nVent RAYCHEM TraceTek TT3000/TT5000 Modular Sensing Cable (H55357)
         - nVent RAYCHEM TraceTek TT3000/TT5000 Bulk Sensing Cable (H55524)
     - Double-contained piping
       - nVent RAYCHEM TraceTek Double-Containment Installation Guide (LIT-138)
       - Preconstruction Record (H55548)
     - Double-contained tanks
       - General Instructions for Double-Wall Tanks (H55313)

2. **Hold a preconstruction meeting to clarify roles and requirements.**
   - If leak-sensing cables will be installed in double-containment piping or other inaccessible systems, hold a meeting prior to construction. Assemble representatives from the involved organizations, including the engineer, contractors (both mechanical for pipe installation and instrumentation/electrical for cable installation), the owner/operator, and the TraceTek supplier. Ensure design and installation of the physical system will be compatible with use of the leak detection system, and that roles are clearly defined (for example, the piping installer is responsible for leaving double-containment piping in a clean, dry condition with a free-running pull rope between access points).
   - **FOR DETAILS REFER TO:**
     - Double-contained piping
       - TraceTek Double-Containment Installation Guide (LIT-138)
       - Preconstruction Record (H55548)
     - Double-contained tanks
       - General Instructions for Double-Wall Tanks (H55313)

3. **Prepare for the installation and schedule it at the proper time.**
   - If the leak detection system is to monitor double-containment piping, ensure that piping is installed in accordance with the TraceTek Double-Containment Installation Guide (LIT-138).
   - Confirm there is a plan for the leak detection system layout, and a complete bill of materials.
   - Ensure that all materials are available (including sensing cable lengths, branching connectors, jumper cables, feedthrough fittings, hold-down clips, and other accessories).
   - Plan to do the installation of the sensing cable only after major construction (which could damage or contaminate the cable) is complete.
   - If possible, plan to install the alarm module first so it can be used to monitor sensing cable immediately after cable installation.
   - Schedule training (by a qualified organization) for those who will install the TraceTek system.
   - **FOR DETAILS REFER TO:**
     - All applications
       - Selection Guide for Environmental Products (H54783)
     - Double-contained piping
       - TraceTek Double-Containment Installation Guide (LIT-138)
     - Double-contained tanks
       - General Instructions for Double-Wall Tanks (H55313)

4. **Install and test the TraceTek alarm module.**
   - Install and test alarm module in accordance with installation instructions shipped with the unit.
   - **FOR DETAILS REFER TO:**
     - All applications
       - Alarm Module Installation Instructions (Instructions are specific to the module: follow the instructions that come with it)

5. **Verify that all major construction is complete.**
   - Check that construction that could damage or contaminate the sensing cable has been completed.
   - **FOR DETAILS REFER TO:**
     - Double-contained piping
       - Containment Piping Readiness Record (H55549)

6. **Prepare the area where the sensing cable will be located.**
   - Hold the TraceTek installation training (conducted by a qualified organization).
   - Clean the area where the cable will be installed to remove debris and sources of contamination. For techniques in double-contained piping, consult the TraceTek Double-Containment Installation Guide (LIT-138).
   - For sumps, containment trenches, and subfloor applications, install TraceTek hold-down clips, positioning them so sensing cable will provide desired leak detection coverage.
   - **FOR DETAILS REFER TO:**
     - All applications
       - TraceTek Installation Training Record (H55554)
       - TraceTek Double-Containment Installation Guide (LIT-138)
     - Double-contained tanks
       - General Instructions for Double-Wall Tanks (H55313)
     - Sumps, containment trenches, and subfloors
       - TT3000/TT5000 Series Modular Sensing Cables (H55357)
7. Test sensing cable before installation

To ensure that each length of sensing cable is intact and free of contamination, follow the test procedures detailed in the sensing cable installation instructions (shipped with each length).

8. Observe proper precautions when handling sensing cables.

**Do**
- Store the sensing cable in a clean, dry area prior to installation.
- Install sensing cable after major construction is complete.
- Clean the area where the cable will be installed.
- Replace TT5000 hydrocarbon sensing cable once it has contacted a solvent or fuel.

**Don’t**
- Drag the sensing cable through contaminants (such as pipe dope, PVC cement, acetone or other solvents, oil, dirt).
- Use damaged or contaminated sensing cable.
- Solder or weld near the cable without protecting it from heat, flux, and splatter.
- Use pulling lubricants to install TraceTek cables.
- Use adhesive tapes or unapproved clamping devices to permanently secure the sensing cable.
- Allow cable connectors to become wet, dirty, or contaminated.

9. Install sensing cable in accordance with instructions for your application.

The proper installation procedure depends on the application. Follow the TraceTek installation instructions identified at right for your application.

10. Test sensing cable after installation.

Test each length of sensing cable after installation to verify that sensing cable was not damaged during installation, and to evaluate whether the condition of the monitored system requires corrective action. Test procedures are detailed in the sensing-cable installation instructions shipped with each length.

11. If using bulk sensing cable, have connectors installed and tested.

Install connectors on TraceTek bulk sensing cable following instructions included with the connection kits.

12. Complete the leak detection system and activate it as soon as possible.

- Install other TraceTek circuit components such as modular branching connectors (nVent RAYCHEM TraceTek TT-MBC-MC) as called for in the system layout; complete the sensing circuit.
- Install the necessary mechanical components, such as the TraceTek pressure feedthrough fitting (nVent RAYCHEM TraceTek TT-PFT/3/4-MC), to complete system integrity and avoid intrusion of liquids from extraneous sources.
- Connect the sensing circuit to the alarm module and activate the system as soon as is practical. Use the module to monitor the system for events during the final stages of construction. Identify and correct problems as they are detected.
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| 13. Verify that the system is operational. | All applications  
Verify that the system is fully operational and ready for use; the TraceTek Precommissioning Record provides a useful checklist. |
| 14. Prepare as-buils and have the TraceTek system tested, mapped, and commissioned. | All applications  
• Gather and record as-built information while the system is still accessible.  
• Have a qualified organization test, commission, and (for locating systems) map the TraceTek leak detection system. |
| 15. Train owner/operator | All applications  
• Identify the persons or groups in the owner/operator organization who will be responsible for the leak detection system. Have them trained in the operation and maintenance of the system. |