FIGURE 10-4 Water testing laboratory

Water Quality and Treatment

Typically, nonpotable rainwater is not required to be treated beyond filtration and protection from storage in direct sunlight and circulation to prevent stagnation, and reclaimed water has already been treated before being returned to the site. Yet, when it comes to other alternate on-site nonpotable water, such as graywater, it is

Code Essentials

Graywater reuse:

- Cannot be stored untreated in excess of 24 hours
- When used for flushing water closets and urinals, it must be treated by means of an on-site treatment system that complies with NSF 350
- Untreated graywater may be discharged to a subsurface landscape irrigation system in accordance with IPC Chapter 14
- Always check with local rules and regulations that may apply.

extremely important to make sure the nonpotable water is treated to the level intended for the application. The code does provide minimum requirements for residual disinfection and filtering in IPC Section 1301.2. However, local laws, ordinances and regulations will likely apply, perhaps through the local health codes and public health authorities. The local jurisdiction may require initial testing or ongoing testing and monitoring, perhaps by an approved testing agency. Further, even though these systems are addressed in the code, they may not be approved for use locally.

Graywater used for flushing water closets and urinals shall be treated by means of an on-site treatment system that complies with NSF 350. Graywater shall not be stored for more than 24 hours.

While the code does not address collection of rainwater for the purpose of treating it to potable water standards, such systems do exist and come under the authority of local jurisdictions. The treatment must be in accordance with local requirements. In the absence of such requirements, and where acceptable to the local jurisdiction, the International Code Council in conjunction with the Canadian Standards Association has developed the CSA B805-18/ICC 805-2018 Rainwater Harvesting Systems, an ANSI standard, which will no doubt prove useful to jurisdictions as they meet the challenges of water conservation and the safe use of collected rainwater and storm water. **[Ref. IPC 1301.1, 1301.2, 1302.5, 1302.6 and IRC P2910.1, P2910.2, P2911.5, P2911.6]**

Protection of Potable Water

Basically, the signage for nonpotable water outlets and labeling of nonpotable water distribution systems shall be as required in IPC Chapter 6, and for the convenience of the user, these requirements are included again in IPC Chapter 13. Storage tanks also need to be identified as nonpotable. Necessary connections for refill or backup purposes, such as a bypass connection from the potable water system to a nonpotable rainwater system as makeup water, must be protected in accordance with IPC Section 608. A physical air gap is the best protection, and if a physical connection is necessary, a reduced pressure principle backflow prevention assembly would be the appropriate method of protection.

Separation of water reuse piping and potable water piping underground shall also meet the provisions as stated in IPC Chapter 6, and these are restated in IPC Section 1301.11. **[Ref. IPC 1301.3, 1301.5, 1301.9.9, 1301.11 and IRC P2910.3, P2910.5, P2910.10, P2910.13]**

You Should Know

The International Code Council® (ICC®) and the Canadian Standards Association (CSA) formed a joint standards committee and have developed the CSA B805-18/ICC 805-2018 Rainwater Harvesting Systems, an ANSI standard for rainwater and storm water catchment, storage, treatment and distribution. This standard includes provisions necessary for treating rainwater for potable use. ●