Focus your attention on the 10 to 20 basic irrigation system components

By LARRY RODGERS

A well-written irrigation plan, like a construction blueprint, instructs users on how to create the best system for their exact needs. The plan reflects current course watering demands, as well as irrigation requirements 20 to 30 years in the future. While the plan specifies the absolute functional necessities of how your station affects the total irrigation system, it's important to pick out 10 to 20 basic components on which you should focus your attention.

These items should be part of the review process and should be evaluated as to how they compare to the intent of the specifications.

1. Industry Standards: U.L., NEMA, NEC, ASME, and uniform plumbing code. If a component is to be built within ASME standards does that mean the same as ASME code construction? No, only an ASME certified shop can provide ASME code equipment. Determine what industry standards are important and use this to influence the final decision.

2. How is the start-up, installation, testing, and training going to be provided? Determine how many visits will be provided in the base cost and ask for the fees of the additional visits.

3. Service contracts and warranty: Determine what conditions are covered under warranty and why service contracts may be required during the warranty period.

4. The skid construction: Determine if it is channel, bent steel, or I-beam and how that affects the integrity of the system. Identify and follow the pump mounting plate thickness. If the system is a vertical turbine, determine how access to the wetwell will be achieved.

5. Pumps: Determine the speed — 3600 rpm pumps are generally less initial cost than 1800 rpm pumps but tend to wear out quicker. On a turbine pump, determine if the head is cast from a mold or fabricated steel and the features of...
prefabricated pump station. Keep in mind the VFD is nothing more than an industrial computer. Just as with personal computers, there are many manufacturers of electronic boxes. To insure the box will perform as required, you should establish minimum operating features that are usually part of the "software programming."

13. PLC (Program Logic Controller): This device is very similar in operation to an Intel PC microprocessor. The PLC will determine how each command is carried out. Today's PLC's are large electronic relays using digital memory in lieu of a cabinet full of relays. Their size is determined in memory (KB) and capacity (input/output count: 1/0). The PLC is used for industrial reliability, cross checking all 1/0's and verifies the system integrity prior to operation.

14. OID: Operator Input Device is the keypad which is similar in operation to the keyboard of a personal computer. When evaluating the system, compare the keypad layout to see if it has been customized for your needs or if it's an off-the-shelf pad with numbers and letters for codes.

15. Safeties: Each system should have a list of safety devices as included equipment. At minimum they should be 1) low water level; 2) low pressure discharge-indicating more demand; 3) lightning/surge protection; and 4) loss of phase protection. Look at each one in addition to others that may be included.

16. Features: This is the "Bells and Whistles" section, where only your imagination, 1/O capability, and software engineering are the limitations. Check to see some basics, such as motor running time meters and general reset alarms, are included. For remote operation and monitoring make a list of what is needed for your use then see if the system has it included.

17. Skid Preparation: The final condition is only as good as the preparation. Insist on steel grit blasting of metal for surface preparation. This process "pits" the metal and allows the paint, epoxy, or hot dipped galvanizing, a surface

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The bottom line — the Aercore 1500 can punch up to 900,000 geometry and "flexi-link" supporting arms ensure the tines more forgiving, and easier to maintain. Plus, mounting

This just in (only a year late):
A survey of U.S. nitrogen fertilizer manufacturers indicates the industry reduced its industrial emissions, as reported on the annual Toxic Release Inventory (TRI) by 3.6 percent in 1994, as compared to the previous year. Also, a survey of U.S. phosphate fertilizer manufacturers shows the industry reduced its emissions (as reported on the annual TRI) by 6.5 percent in 1994.

Ladies and gentlemen, a nice round of applause for the fertilizer industry, which has chosen to address it emission issues before the heavy-hand of regulation lowers the boom. Indeed, these decreases were posted despite increases in production.

Both surveys, conducted by the International Fertilizer Development Center for the Washington, D.C.-based Fertilizer Institute, are compilations of information reported annually to the Environmental Protection Agency (EPA) under the Community Right-To-Know Law. EPA’s involvement probably explains why we’re just now getting figures for 1994... Ha! Just kidding! In truth, when it comes matters of Red Tape, EPA has really cleaned up its act. In February we reported on innovative fast-track registration programs EPA created to more quickly accommodate reduced-risk chemicals. Last month, we reported on EPA’s hugely successful effort to reduce the number of scientific studies chemical manufacturers conduct — and re-conduct — in support of products applying for reregistration.

The time and money saved by this program should be enough to silence even EPA’s harshest critics — for a couple of weeks, at least.

More Updates: The Budd Family of Winston Salem announced July 11 that it has completed its acquisition of Loft's Seed, Inc. As noted in our earlier story on the sale (GCN May 1996), no discernible changes in the Loft’s proprietary name or product line are expected.

Also from the unfinished department, AgrEvo USA Co. and The Nu-Gro Corp. of Woodstock, Ontario, Canada have completed transfer of AgriEvo’s Nitroform/Nutralene business to Nu-Gro’s U.S. subsidiary, Omnicology, Inc. of Gloversville, N.Y.

Though Omnology and AgriEvo jointly honored existing prices and marketing prices through July 31, new programs — expected to be similar — were scheduled to be announced Aug. 1.

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to adhere to:

18. Filtration: The degree and type of filtration depends on the water source. At minimum insist on Wye Strainer with a 20 mesh screen. On the extreme end there are systems that will filter down to 5 micron (1 micron = .00004 inch).

19. Main Disconnect: This is usually required by utility companies and could become a big expense if left off and required later.

20. 120-Volt Power Conditioner: The only item that has remained constant in the golf course irrigation industry is power. If you have power to operate the pumps you can count on power to operate the irrigation system. It is our policy to use the pump location as our sole power source. It’s very important to send proper voltages to the solid state controllers. If a power conditioner is called for, be sure it is included.

The Bottom Line: Don’t evaluate solely on today’s price. Use GM vs. Cadillac example. Not every course needs a Cadillac, but you better understand what you don’t need and how that translates into the final cost. Initial bid quotes, ignorance or simply going with your buddy down the road should not play a role in the final decision.

Also, don’t buy technology just for technology’s sake. Buy it for what it can do for you. VFD alone isn’t the answer, the software that operates the VFD is the answer.

Following specifications protects short-term and long-term interests, for with pump stations, what you specify is what you get.

COMMENTS