



## Fact Sheet: Rain Water Recycle System at Target Field

- A custom-designed Rain Water Recycle System (RWRS) will be developed, installed and maintained to recycle rain water collected from the Target Field's lower seating bowl and field, an area spanning approximately seven acres.
- The rain water and irrigation water within the ballpark's seven-acre collection area will percolate through the ball field's underground drainage system and will be stored in a 12 foot diameter cistern buried beneath the field's warning track.
- The RWRS will filter water collected in the cistern to 0.01 micron (versus typical city water filtered between 0.1 to 1.0 micron) via the following sequence of operations:
  - 1) **Initial Filtration –**
    - The water will be filtered to a minimum level of 100 microns with a back washable filter. The backwash from this filter will be discharged to the sanitary sewer.
    - The filtrate from step one will be further filtered through Pentair's proprietary AquaLine™ Filtration System to a level of approximately 5-10 microns.
  - 2) **Ultraviolet Disinfection –**
    - Next, filtered water will be disinfected using Ultraviolet (UV) Light technology prior to the final Ultrafiltration (UF) process.
  - 3) **Ultrafiltration –**
    - The disinfected water will then be filtered to a level of 0.01 micron using a hollow fiber Ultrafiltration (UF) System at a rate of adjustable to between 125 and 250 gallons per minute. The feed and back-pulse pumps for this system will be integrated into the skid. The UF system will be back-pulsed and cleaned at a frequency based on the build up of pressure due to the accumulation of suspended solids removed by the UF System. The backwash from this filter will be discharged to the sanitary sewer.
  - 4) **Chlorine Treatment –**
    - Following ultrafiltration, chlorine ( $\leq 1$  ppm) will be added to the water to maintain sterility.
  - 5) **Holding Tank –**
    - The water then goes to a holding tank. Water in the holding tank will be re-circulated through another UV Light Disinfection System to maintain water quality. The use of UV in combination with chlorine helps to minimize the amount of chlorine needed to maintain sterility throughout the system.
    - When there is no demand for water, the treated water will accumulate in the holding tank and overflow back to the cistern.
    - When there is demand for the water to irrigate the field or wash down the lower bowl of the stadium, water booster pumps will draw water from the holding tank and supply water at the specified pressure and flow rate.

-MORE-

## Pentair RWRS at Target Field – 2

- Pentair's RWRS overall system capacity will be designed to meet the ball field's irrigation needs with:
  - Two field zones watered simultaneously for two hours: 250 gallons per minute
  - Single field zone watered for four hours: 125 gallons per minute
- The RWRS is capable of supplying all of the wash down water for Target Field's lower seating bowl
  - Wash down: 30 gallons per minute, per eight hour shift (6 nozzles at 5 gpm each)
- The RWRS performance and water quality will be remotely monitored via a web-based dashboard to enable continued optimal performance and provide rapid service. Pentair will integrate leading market technology to develop this controls platform.

###