FACILITIES STANDARD

NAME : Reagent Water Piping Systems (RWPS) ORIGINAL DATE : 11-01-92
NUMBER : 15461 REVISION DATE : 03-16-99

PURPOSE:

1. The general purpose of each Facilities Standard is to provide minimal criteria for construction materials at University facilities regarding code compliance, warranty, approved products, execution and uniformity.

2. To protect the health and safety of patients, visitors, students, faculty and staff, in addition to protecting non-project UAB property, all construction must be in accordance with: NFPA 241 safeguarding construction, alteration and demolition operations; Standard Building Code, Chapter 33, regarding site work, demolition and construction; NFPA 101 Life Safety Code.

3. Construction safety is the responsibility of the contractor in accordance with the regulations and codes of the agency having jurisdiction, and according to the guidelines adapted by OSHA.

4. The **Reagent Water Piping Systems Facilities Standard** establishes a series of guidelines for specifying this particular item on any construction project at the University. ***This Facilities Standard is not to be regarded as a specification.***

GENERAL:

A. REAGENT WATER PIPING SYSTEMS (RWPS) shall be provided for all Pure Water Systems requiring Type 1 and Type 2 grade water.

B. Warranty shall be one year from Substantial Completion.

PRODUCTS:

A. RWPS shall be UL listed and conform to A.S.M.E. STANDARDS.

B. RWPS shall be suitable for system sizes ranging from 1/2" to 4".

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C. RWPS shall be rated for supply pressures up to 150 psi.

D. RWPS shall be rated for temperatures up to 140 degrees fahrenheit maximum.

E. Pipe and fittings shall be Schedule 80 Polypropylene.

F. Pipe fittings shall be socket joints or approved mechanical joint.

G. Socket joints for Type 2 Systems shall be made up with solvent cement.

H. Socket joints for Type 1 Systems shall be made up with heat fusion.

I. Mechanical joints shall be Orion “Riontite” or approved equal.

J. Valves shall be polypropylene, full port ball type.

K. All piping shall be precleaned and sealed on all ends at the manufacturing plant and shall remain sealed until installed.

L. All valves and fittings shall be pre-cleaned and packaged in sealed polyethylene bags.

M. All piping within 20 feet of any UV light in system shall be Schedule 40 stainless steel with socket weld fittings.

N. All system tanks, equipment and components shall be mounted within a concrete curb to contain water in the event of line breakage.

EXECUTION:

A. Piping joints for Type 2 Reagent Water Systems shall be made up using solvent cement made up according to manufacturer's instructions.

B. Piping joints for Type 1 Reagent Water Systems shall be made up using a socket heat fusion method as recommended by the manufacturer's instruction.

C. Connections to the Domestic Cold Potable Water System shall be through an approved backflow preventer as required by The Birmingham Water Works Distribution Department.

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D. Final hook-up to the Reagent Water Tank Farm shall be made according to the tank supplier's instructions.

E. Piping to outlets shall be recirculated as close to the outlet as possible.

F. Isolation at each outlet from main system shall be with above-mentioned ball valves.

G. Piping shall be supported as recommended by the manufacturer's instructions.

H. System shall be leak tested and pressure tested prior to sterilization.

I. UV lights shall be disconnected, sub-micron filter cartridges removed and 5 micron filter cartridges installed prior to testing.

J. System shall be sterilized with proper mixture of deionized water and hydrogen peroxide.

K. Pipe line identification and valve tags shall be provided according to U.A.B. Facilities Standards.

END OF STANDARD

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