1.1 **GENERAL**

1.2 **Coordination Requirements**

.1 Coordinate with SFU Facilities for distilled water applications and services.

1.3 **Description**

.1 Additional SFU design and approval requirements for Specialty Piping Systems.

2.1 **MATERIALS AND DESIGN REQUIREMENTS**

2.2 **General**

.1 All specialty piping systems must be submitted, reviewed, and approved by SFU Facilities.

.2 Medical gas piping shall be in accordance with CSA Z-305.1. Non-Flammable Medical Gas Piping Systems.

2.3 **Distilled Water Systems**

.1 Consideration shall be given to limiting outlets to one per laboratory. Consult with SFU Facilities.

.2 De-chlorination prior to distillation may be required at some locations. Consult with SFU Facilities.

.3 Distilled water may be conveyed via the following:

.1 High density polyethylene pipe using proper fittings and connectors. This is the recommended piping system for distilled water.

.2 Tin lined copper pipe with the proper tin compression or belled couplings. Care must be taken to ensure that no copper comes in contact with the distilled water at connections or elsewhere.

.3 Teflon with the proper fittings and connectors.

.4 Nylon with the proper fittings and connectors. Expansion is a serious problem.

.5 Polyethylene with the proper fittings and connectors. This material has a low softening point - 140° F. Care must be taken when selecting the bonding solvent.

.6 Polypropylene with the proper fittings and connectors. Fillers in the polypropylene shall be as little as possible.

.7 Polyvinylchloride (P.V.C.) with the proper fittings and connectors. This material has a low softening point - 160° F. Care must be taken when selecting the bonding solvent.

.8 Stainless steel with the proper fittings and connectors. Use Type 304-L and its welding alloy. Plastics other than the aforementioned are not recommended.

.4 Distilled water faucets compatible with the distilled water supply piping are required.
2.4 Localized Stills

.1 For high quality distilled water, localized stills are recommended over high quality distribution from a central source.

.2 Where local stills are required, it is recommended that chilled water from the chilled water system be used for condensing purposes.

2.5 Vacuum

.1 Vacuum piping may be required at some locations. Consult with owner.

2.6 Compressed Air

.1 Copper is recommended for compressed air piping.

***END OF SECTION***