readily brine is dispersed in the ocean and evaluate whether landfill disposal has an impact on ocean disposal.

104.3 Drawing and Specifications. Plot plans drawn to scale, dimensioned, showing direction and approximate slope of surface, location of all coastal area, location of present or current site for drainage, intake of seawater or brackish water and all details of construction necessary to ensure compliance with the requirements of this section including equipment, materials, methods of assembly and installation.

104.4 Permits. Permits shall be required before any work is commenced and approved by the Authority Having Jurisdiction.

104.5 Desalination Technologies. System components, environmental impacts of desalination process and brine disposal shall be approved by the Authority Having Jurisdiction and incorporate energy reduction technology that reduces consumption.

Desalination technologies shall include one or a combination of reverse osmosis, distillation, electrodialysis and vacuum freezing.

104.5.1 Materials. Selection of materials shall be based on the type of installation, corrosion resistant properties, pressure, temperature, chemically compatibility, source of water, processing and product water quality.

Piping installed in the desalination process shall be of corrosion resistant, chemically compatible, and able to withstand varying temperature and pressures. Such material shall include type 316 L stainless steel, high alloy steel, titanium, high-density polyethylene (HDPE), fiberglass; glass reinforced plastic or other approved material; listed or labeled by a listing agency in accordance with its intended use and shall conform to approved standards referenced in this code. Distribution piping supplying potable water shall meet the requirements of Section 301.1.1 and Table 6-4.

Pumps, valves and tanks installed in the desalination process shall be of corrosion resistant materials, chemically compatible, able to withstand varying temperature and pressures and compatible with component parts. Such materials shall include high-density polyethylene, stainless steel or copper/nickel alloys or other approved material; listed or labeled by a listing agency in accordance with its intended use and shall conform to approved standards referenced in this code.

104.6 Feedwater. Intake of seawater or brackish water shall be either surface (open intake) or nonsurface (wells and infiltration) type and pumped to the desalination plant. Where available, existing power plants shall be used to collect water for use as the intake source for the desalination process.

104.7 Location. The location and construction shall be designed to minimize adverse impacts on environmental and aquatic ecology. Intake piping for distillation plants shall be located not less than 500m (1,640 ft.) away from sewage treatment plants, industrial areas, freshwater discharge, or other locations to prevent intake of discharged effluent.

104.8 Pretreatment. Intake sea or brackish water may pass through pretreatment to remove suspended solids and other solid matter. This may include coagulation, sedimentation followed by filtration or by using microfiltration or ultrafiltration membranes.

104.9 Post-Treatment. Water for domestic use shall be treated to stabilize, disinfect, provide corrosion inhibition, adjustment of a ph level of 8 and restored with nutrients such as magnesium, calcium, fluoride, ions, zinc, copper, chromium, sodium, and in accordance with the provisions set forth by the Authority Having Jurisdiction and the Guide to Water Supply Regulations. Post disinfection shall be required to control micro-organisms during storage and off-site distribution. Treatment and chemicals used shall be approved by the Authority Having Jurisdiction.

104.10 Waste Treatment. The location of wastewater discharge from desalination plants shall be approved by the Authority Having Jurisdiction and shall discharge into areas with high levels of mixing or by the use of diffusers. Wastewater discharge shall be evaluated based on water quality standards and the total discharge concentration. Chlorine and other biocides shall not discharge directly into the ocean and shall be neutralized before discharging into the ocean.

104.11 Maintenance. Periodic cleaning shall be required to remove scale and salt deposits from pipes, tubing and membranes. Alkaline and acid cleaners shall be used to remove scale and salt deposits. Pipes, tubing and membranes shall be flushed after cleaners are used and before system start up.