

Exhibit D

Alternatives for Mercury-Containing Devices & Chemicals

MERCURY CONTAINING PRODUCTS	LOW-MERCURY/MERCURY-FREE ALTERNATIVES	COMMENTS
Batteries (mercury oxide)	Lithium, alkaline	
Button batteries	Zinc-air type button batteries	
Lights: Fluorescent & High Intensity Discharge (HID) Lamps	Ordinary glow lights; low sodium vapor tubes (yellow); opticals, high-energy, long-lasting lights, mercury-free HID lamps	Fluorescent lights contain mercury; but are energy efficient, reducing mercury emissions from coal and oil combustion.
Manometers/Barometers	Aneroid and electronic manometers, analog gauges (vacuum gauges)	Accuracy comparable to mercury device.
Mercury float control switch	Mercury-free float switch	Accuracy comparable to mercury device.
Microwave oven (old models)	New models	Heat is generated through mercury vapor bulb
Rubber floors – 3M Brand Tartan Track/Flooring	Mercury-free flooring	Brand installed during early 1970s, used in gyms
Silent wall switches	Audible click wall switches	Manufactured prior to 1991
Thermometers	Electronic (digital), spirit filled, alcohol filled	
Thermostats - mercury tilt switch	Electronic Models and Snap Switches	Recycling program available through contractor
Vacuum system may use mercury-containing manometer	Eliminate where possible	
CHEMICALS	MERCURY-FREE ALTERNATIVES	COMMENTS
Colorimetric chloride analysis	Ion-selective electrode method	
Gram iodine stain	None	Contaminated with mercury because stain used after Zenker's or B5 solutions
Hematoxylin "Solution A"	Sodium Iodate, Gill's Hematoxylin, Mercury-free hematoxylin	Mercuric oxide is used in the preparation of some type of hematoxylin solutions
Mercury (II) Chloride	Magnesium chloride/sulfuric acid	Main ingredient in tissue fixatives such as B5 and Zenker's solution.
Mercury Iodide	Phenate method	
Mercuric Oxide	Use of copper sulfate or potassium sulfate as catalysts in Kjeldahl reactions	
Phenolic Mercuric Acetate	Ion selective electrode	Reagent not widely used
Zenker's solution Histological fixatives	Zinc formalin Freeze drying	After using Zenker's solution all rinses contain mercuric chloride