Appendix A
Table A

Table A - Multimedia Cap Function Analysis

	Multimedia Cap Layer	Material	Inerim Cap Function	Final Development Cap		
				Areas Outside of Structures	Below Floor Slab	Below or Adjacent to Foundation on Piles
	Cover Soil	2 foot thick clean, imported cover soil, placed in two loose lifts and 6" of crushed stone	Protects multimedia cap against freeze-thaw and mechanical damage. Spreads concentrated loads over synthetic layers.	Leave in place; restore to original design.	May replace with 5" min concrete and management control.	May replace with 5" min concrete and management control.
	Visual Barrier	Bright orange synthetic grid installed 1 foot above geomembrane.	Provids a visual warning of presence of underlying membrane.	Leave in place; restore to original design.	Replace except where concrete is placed within 1 ft of geomembrane.	Not required; membrane penetration prevented by foundation element.
Synthetic Layers	Geotextile Cover	Non-woven getextile bonded to top of the drainage net, 16 oz/sy, overlap joints.	Prevents overlying soil from clogging the geonet flow voids.	Leave in place; replace to original design.	Leave in place; replace to original design.	Not required. Protect geomembrane before concrete is placed.
	Synthetic Drainage Layer	High flow HDPE geonet. Placed with overlap joints.	Provides drainage for cover soil. Conveys water down slope. Designed to perform under high overburden stress.	Leave in place; replace and restore drainage / discharge down slope.	Replacement not needed where infiltration is collected by structure. Seal cut faces against soil clogging.	Not required. Infiltration prevented by foundation element.
	60-Mil LLDPE Geomembrane	60-mil thick linear low-density polyethylene membrane. Overlap seams placed shingle-style, with welded seals. Positive slope from center of site to perimeter.	Protects overlying materials from subsurface contamination, and prevents infiltration to reduce ground water pump & treat quantity.	Leave in place; replace to original design. Extrusion weld seams.	Leave in place; replace to original design. Extrusion weld seams.	Required. Function is to protect overlying concrete from underlying contamination. Extrusion weld seams.
	Geosynthetic Clay Layer (GCL)	Low permeability bentonite clay sanwiched between two synthetic mesh layers; about 1/4" thinckness. Overlap joints, with powdered bentonite seal at joints.	Functions in conjunction with the overlying membrane to seal leaks through imperfections in the membrane. Bentonite should swell on contact with water leaking through the membrane to seal the leak.	Leave in place; replace to original design.	Replacement not needed where infiltration is collected by structure.	Not required; infiltration is prevented by foundation element.
	Geotextile Cushion	Non-woven geotextile, 16 oz/sy, needle punched.	Protects the geomembrane and GCL from mechanical damage due to contact with the crushed stone capillary break.	Leave in place; replace to original design.	Leave in place; replace to original design.	Not required where overburden load is carried by foundation element.
	Capillary Break Gravel	Min 6" thick layer of washed No. 57 crushed stone.	Prevent chromium from rising into the multimedia cap by capillary action.	Leave in place; restore to original design.	Leave in place; restore to original design.	Restore where foundation is above managed water level. Not required below water level.
	Base Geotextile	Non-woven geotextile, 16 oz/sy, needle punched.	Separates Capillary Break Gravel from the subgrade soil to prevent soil fouling of the Capillary Break Gravel.	Leave in place; replace to original design.	Leave in place; replace to original design.	Required where capillary break gravel is placed.
	Cap Subgrade Fill or Existing Subsurface	Compacted miscellaneus fill over abandend foundation.	Compacted fill was placed to establish multimedia cap grades and to support the multimedia cap. Asphalt paving may be directly below the capillary break and base geotextile in some areas.	Leave in place; restore to original design.	Leave in place or restore to provide positive slope.	Not required; geomembrane line and grade controlled by adjacent fill.
	Mechanical Boot	LLDPE extrusion-welded boot field welded to geomembrane. Neoprene gasket (closed cell) with stainless steel pipe clamps to close with steel pipe pile wall.	none	none	At each pile penetration through geomembrane.	At each pile penetration through geomembrane.