

APPENDIX B

RAFFINATE SLUDGE CHARACTERISTICS

This appendix summarizes the results of water content and density testing of raffinate sludge at the SFC facility. Raffinate sludge was processed by SFC in 2005, using pressure filtration. Filtered raffinate sludge was placed in polypropylene sacks and stored at the SFC facility for future offsite disposal or placement in the disposal cell. The table below summarizes the available test data on the raffinate sludge prior to filtration, test data from bench-scale pressure filtration testing in 2003, and test data from full-scale pressure filtration in 2005.

Phase of testing	Solids Content (%)	Water Content (%)	Dry Density (pcf)	Wet. Density (pcf)	Void Ratio
Unfiltered sludge (ESCI, 1998)	12.9	677	8.7	67.9	18.3
Unfiltered sludge (testing by SFC)	18	456	12.7	70.6	12.3
Bench-scale filtered sludge (testing by SFC in 2003)	42	138	35.6	84.7	3.73
Actual filtered sludge (average of 4 samples)	45	122	39.3	87.1	3.29

These test results indicate that the pressure-filtered sludge occupies roughly 1/3 to 1/4 of the volume of the unfiltered sludge. The actual filtered sludge was placed in polypropylene sacks for transport to the disposal cell or off-site.

In addition to the testing summarized above, the unconfined compressive strength of the actual filtered sludge (measured by SFC with a penetrometer) was 41.7 psi (3.0 tons per square foot).