



Council for Scientific and Industrial Research (CSIR)

Natural Resources and the Environment (NRE)

Durban, South Africa

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Title:	Desalination of bleach plant effluents
Abstract:	The purpose of the project is to investigate the use of membrane technologies to treat the bleach plant effluent at a kraft mill. Technologies under investigation include ultrafiltration, nanofiltration and reverse osmosis. Ultrafiltration will be used for the reduction of high molecular weight organic compounds, and will function as a pre-treatment for reverse osmosis. Reverse osmosis will be used for the removal of monovalent cations, such as sodium, and for the production of high purity water. Additionally, the use of nanofiltration for the extraction of recoverable chemicals will be studied.
Lead institution:	CSIR
Partner institutions:	UKZN, PAMSA, MEMCON
Principal Investigator:	Prof. Bruce Sithole
Student:	Elizma Syphus
Degree:	MSc
Funded by:	CSIR
Start date:	Sept 2014
End date:	-
Feedstock:	Bleach plant effluent
Value chain products:	Purified water, caustic
Geographic source of the feedstock:	KZN, Mpumalanga