

MDS Lithium Process Overview

Acid Digestion of Clays

Using Proprietary Acid MDS Membrane Processes

Acid UF Step

pH 0.4 Suspended
Solids 150 ppm Li

Concentrate Suspended Solids (150 ppm Li)
2% (98% Recovery) returned to leach tanks

Acid UF Membrane 0.04 microns

Permeate pH 0.4 Clean Acid 98% Recovery
and 150 ppm Li in Permeate Feed to NF

Acid NF Step

pH 0.4 Li 150 ppm, Ca,
Mg, REE

pH 0.38 Ca, Mg, REE
Li 132 ppm 7.5% of Feed
Volume

Acid NF Membrane 0.0008 microns

Permeate pH 0.43 Li 152 ppm
>100% Transmission of Lithium at
92.5% recovery...Feed to Acid RO

Acid RO Step

pH 0.43 152 ppm
Lithium

8.3% Concentrate (91.7%) Recovery
ppm lithium pH 0.93 1050

1200 psi RO Membrane 0.0005 microns

Permeate 91.7% as pH 0.38 Clean Acid &
56 ppm lithium for recovered for Recycle
100% of lithium recovered

PFD

