Oasis Filter International Ltd.

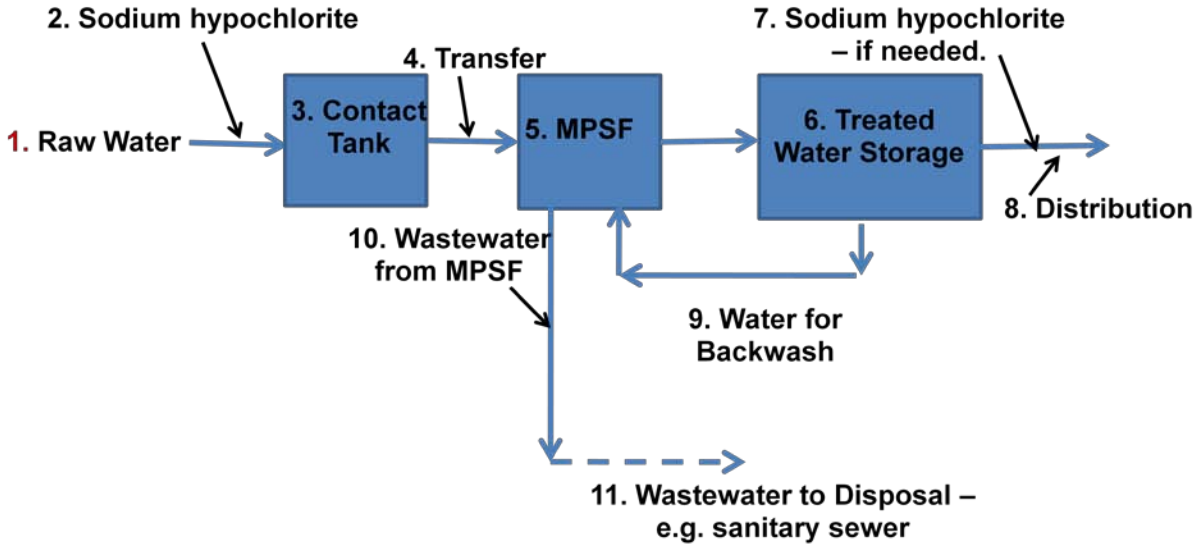
Stavely Water Treatment Plant
Alberta, Canada
Manganese Removal Using MPSF Technology

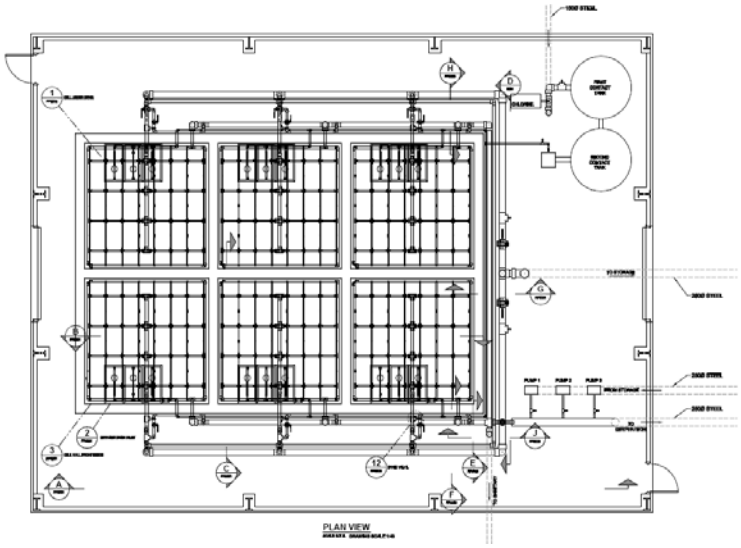
Design constraints and objectives

- Town of 700 people.
- Groundwater supply not under direct influence of surface water.
- Manganese above 0.05 mg/L (as high as 0.4 mg/L), hydrogen sulfide (detectable odor) and presence of sulfate reducing bacteria.
- Required treatment capacity of 1,200m3/day or 50,000 litres per hour.
- Minimum chemical requirements.
- Minimum level of automation.
- Minimum complexity – Operator Level 1 if possible.
- Backwash water to be disposed of in town lagoon through existing sanitary sewer.

Oasis Filter International Ltd., 2525 Macleod Trail SW, Calgary, Ab., Canada, T2G 5J4
Web: www.oasisfilter.com Email: info@oasisfilter.com Telephone: 403 269-1555 Fax: 403 264-6244
November 7, 2011

Process flow diagram for Mn removal.





- 6 (4 m x 4 m) cells
- Each cell can treat a maximum of 10,000 L/h (Loading of 0.6 $m^3/m^2/h$)

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