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AR#1079②

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In your 2012 IWC paper you listed 5 operating Italian plants (6 total) & proposed Steam Electric reactors only 4 operating in Italy plus one in China from 2011 IWC paper by Nelson

3 operating

1 not due to commercial issue
other diff.

supplied by Aquatech

What can a facility do if wastewater is not successfully crystallized - Would you agree some of these possibilities include:

- 1 - sending brine soln. back thro phys/chem ✓
- 2 - mix w/fly ash ✓
- 3 - spray drying ✓
- 4 - hauling offsite ✓

Yes

~~During~~ During the presentation re Merrimack Station, the presenters explained that the wastewater was partially softened? My understanding was that a partially softened process generates salt w/ hygroscopic nature - but doesn't seem to be the case here, as PSNH says salt cake sent to regular landfill that doesn't require special processing of leachate.

Not discuss Merrimack
Italian plants - partially softened.

in a fully softened feed all Ca & Mg removed.
→ completely NaCl

Partially softened → leave Ca in the feed so can run seeded slurry process
CaSO₄ CaCl₂ NaCl

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In general how long does it take to optimize a VCE system? - understanding it depends on site specific considerations.

Not fully ever optimized
Gain confidence & experience on how to react to changes in coal & limestone.

How do multiple effect crystallizers conserve energy?

evaporator.
minimized steam consumption
" energy consumption - trading for capital.

1° 10 lbs/hr = steam 2° 5000 lb/hr. of steam
4° 2500 lb/hr of steam.

Is most of noise from a VCE system due to high # of pumps needed to move wastewater around?

or rotating equipment -
flow across valves

Others:

- dedicated boiler

- ZLD

can't speak to Merrimack.

vapor compression → function of head at ΔT - adv. how you arrange feed & delivery elevation