



Low Acid Recovery Unit



Nameplate capacity: 8 million lbs/yr of acetic acid, 3 million lbs/yr of formic acid
Operating capacity: 6 million lbs/yr acetic, 1.2 million lbs/yr of formic

Started up in 1996. Solvent based extraction process with purification via distillation (extraction, dehydration, stripping, distillation). Intended to recover low concentrations of acetic and formic acids from process wastewater prior to discharge.

The process to recover formic and acetic acids from the oxidizers overhead waste water (A-112 and A-6112 stills bottoms) consists of extraction, dehydration, acid stripping, acid purification, and solvent regeneration.

The Design Basis for the plant is:
Aqueous feed:

- 45,000 pph total
- 2.5 wt% HAC
- 1.3 wt% HFO
- 1.0 wt% formaldehyde and
- Trace amounts of aromatics, methyl formate, methyl acetate and methanol

Cyanex solvent loss: Raffinate to waste water treatment at 50-100 ppm Cyanex.

Overall process recovery:
92% for HAC
80% for HFO

Products rate:
1,035 pph HAC at less than 1,500 ppm water and less than 500 ppm HFO
475 pph HFO at less than 0.5 wt% HAC

