

APPLICATION REVIEW

Candy Manufacturer Reduces Wastewater Disposal Costs and Recovers Concentrate for Reuse with Vacuum Evaporation

Introduction

A multinational food group who manufactures confectionery products such as sweets, chocolate, and candies needed to reduce its wastewater disposal costs and recover concentrate from one of its candy manufacturing processes.

The Challenge

During the candy line manufacturing process substantial effluent was being produced and then hauled away to their water treatment plant at great expense. In addition, the concentrate in the fluid was being wasted. So, to reduce costs and add to their revenue stream, the company needed to find a water treatment solution that would help recover most of this wastewater for reuse in order to limit haul-away, while also recovering as much of the concentrate as possible so that it could be reused for animal feed.

The Solution

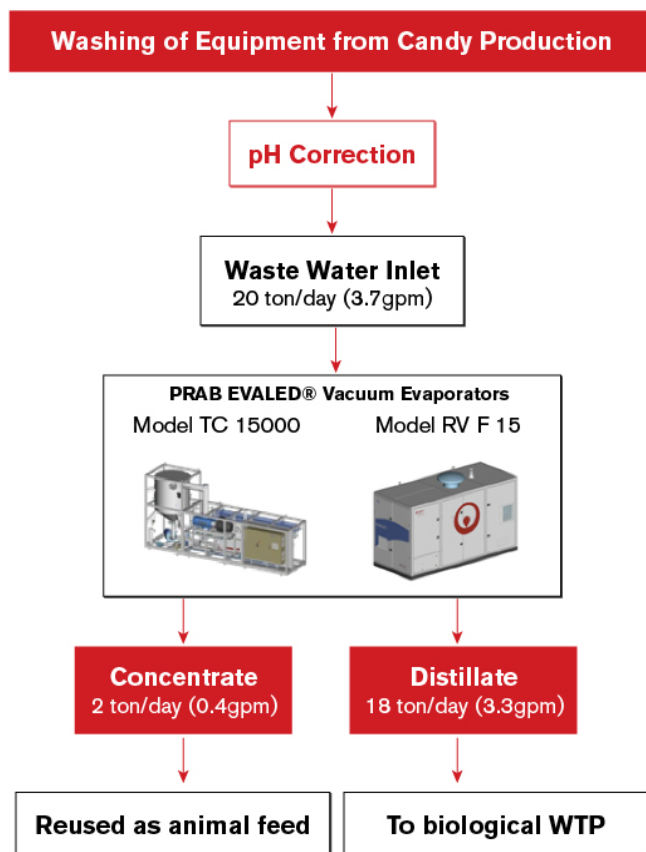
Because no two wastewater streams are exactly alike, in order to find the best solution to meet the company's goals, a careful review of their process was completed, along with a thorough testing and analysis of the wastewater. It was then determined that PRAB's EVALED® Vacuum Evaporators would be the best solution.

Results Achieved

After adding the Vacuum Evaporators to the process, the company has seen significant cost reductions. The results achieved include:

- **90% of water recovered for reuse**
- **Decreased wastewater disposal costs**
- **Concentrate recovered & reused for animal feed**
- **Payback in less than 1 year**

Wastewater Treatment Process Implemented



Wastewater Treatment Results

Parameters	u.m.	Waste In	Distilled Out	Concentrate Out
pH		3	<5.5	5.5-7.5
COD	ppm	<50,000	<1,500	-
TS at 105° C	%	2-4	-	30*
BOD5	ppm	18,000	<600	-
Conductivity	µS/cm	<500	<50	-

*TS required by company was >25%