RJ Spagnols
WINE & BEER MAKING PRODUCTS

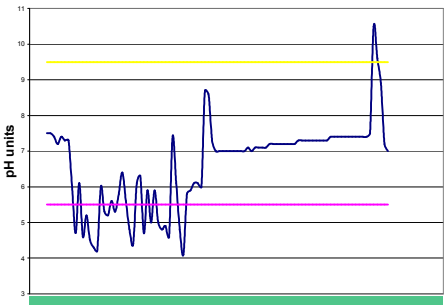
Enviro-Stewards
Engineers & Scientists

# Eliminating Risk and Saving Money: Effluent Discharge

**Source of Risk:**

RJ Spagnols' process effluent was below the sewer discharge limit (pink line) during production, neutral overnight, and above the caustic limit (yellow line) during their morning CIP cleaning.

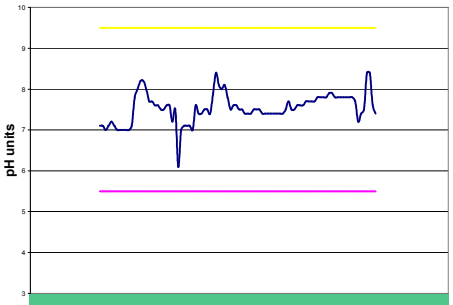
Conventional, end-of-pipe treatment would be expensive and would require hazardous acid and caustic neutralizing agents to be brought onsite and metered into the effluent.




BEFORE: pH below threshold during production; above threshold during cleaning.

**Elimination of Risk:**

Wine products bottled by RJ Spagnols are naturally acidic.
A Pollution Prevention assessment identified sufficient conservation opportunities to eliminate the acidic discharges to the sewer. In-plant equalization eliminated the daily caustic exceedance.

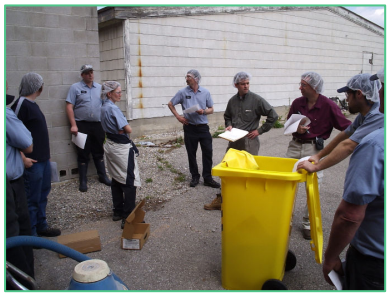



AFTER: pH within threshold.

**Benefits:**

- Effluent pH compliance was achieved without construction of (expensive) end-of-pipe treatment facilities;
- The water balance revealed that acidic discharges had dissolved the top of the process drain as well as a substantial portion of the concrete slab supporting their tanks (see photo). This substantial safety risk was then addressed;

- Engineering controls and single page laminated procedures were developed for each potential source of spillage. Spill response training familiarized staff with prevention, response, and reporting requirements;



- Over-strength sewer surcharges for organic material decreased from $78,000/yr to $0; and
- The overall product yield of the facility increased from 78% to >99%.

**The P2 measures have a projected net savings of $220,000/yr with a combined payback period of 2 months**