

**“The Sewer Effluent Permit For Our Mill Is Being Revised. With An Operation As Unique As Ours, How Can We Control pH Levels To Meet The New Permit’s Requirements?”**

### **What Our Client Said**

We operate a specialty mill in a very unique way, with frequent downtime each month. This schedule results in varying periods of high and low effluent flows and wild swings in pH levels depending on conditions.

Now we’re facing a change to our sewer effluent permit, and we have no choice but to prepare a large capital project in response. We plan to lift all of our sewer contents to a common mill-wide, above-ground tank for retention and then treatment (at a cost of somewhere between \$6 million and \$7 million). We need LSI to look at the project and provide value-added options.

### **What We Heard**

Our situation is too unique for a one-size-fits-all solution! We need LSI’s experts to evaluate the situation, perform some front-end engineering and give us options that will help us to meet the new permit requirements without adversely impacting our operation or our budget.

### **What We Did**

After listening closely to the client and studying the mill’s processes, we determined that the challenge could be overcome by implementing a phased approach that would limit mill downtime and the client’s financial risk.

The key was LSI’s strategy to analyze the sewer effluent as individual high and low pH contributors instead of one combined effluent stream. This allowed us to understand the dynamics of the total system when individual sources came online and offline, which led to a ‘pre-treatment’ approach meant to tackle the toughest individual sources. By combining improvements to the existing pH treatment system with the new pre-treatment, the mill was able to successfully meet the new permit requirements with minimal disruption and manageable costs.

### **LSI provided:**

A full design-build effort for this project, including:

- Process design
- Piping design
- Electrical and instrumentation design
- PLC and DCS programming
- Project management
- Construction management
- Contracting
- Procurement
- Start-Up
- Commissioning
- Training
- Validation

## ***The Results Speak For Themselves***

### **Savings Of 70%**

The mill avoided the lion's share of its planned capital expenditure altogether. LSI's approach reduced the capital spend for this project by 70%, saving the plant millions of dollars.

### **System Performance More Than Tripled**

The performance of the effluent pH control system is measured in "minutes per day" outside permit limits. The average before the project was 12 minutes/day, and the project reduced that to just 3 minutes/day.

***Let the engineers and experts at LSI listen to your challenges today, and we'll work together with you to write a success story for your operation.***



### **LSI listened,**

LSI listened, then developed a custom solution that was a perfect fit for the mill's unique operation. Because LSI is independent and not owned by a manufacturer, we were able to put the customer's needs first – designing the best solution to meet their needs.

***Before undertaking a daunting capital expenditure, the client contacted LSI and we're happy that they did. With LSI on the case, pH levels were controlled without the need for extensive construction or costs.***