INTRODUCTION
Activated sludge treatment processes produce excess biomass as waste activated sludge (WAS) that is difficult and expensive to dispose. Two pilot-scale reactors were operated at the LaPrairie Wastewater Treatment plant (one control and one ozonated) to investigate the sludge reduction potential of partially ozonating sludge return activated sludge (RAS).

OBJECTIVES
- Reduce the amount of excess sludge produced by 50%-60%.
- Verify the stability and treatment efficiency of the ozonated treatment process under different operating conditions, such as nitrification/denitrification and different sludge retention times (SRT).

PROBLEM
Nitrifiers can be affected by temperature. Coupled with the stress from ozone, system efficiency may be compromised during cold months.

SYSTEM SCHEMATIC
1. Anaerobic Tank
2. Aeration Tank
3. Clarifier Tank
4. Effluent
5. Waste Activated Sludge
6. Ozone Contactor

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