

Hydro Mechanics Systems Ltd.

The Lebanon Aerobic Digester Story

"Clean water. There is no substitute."

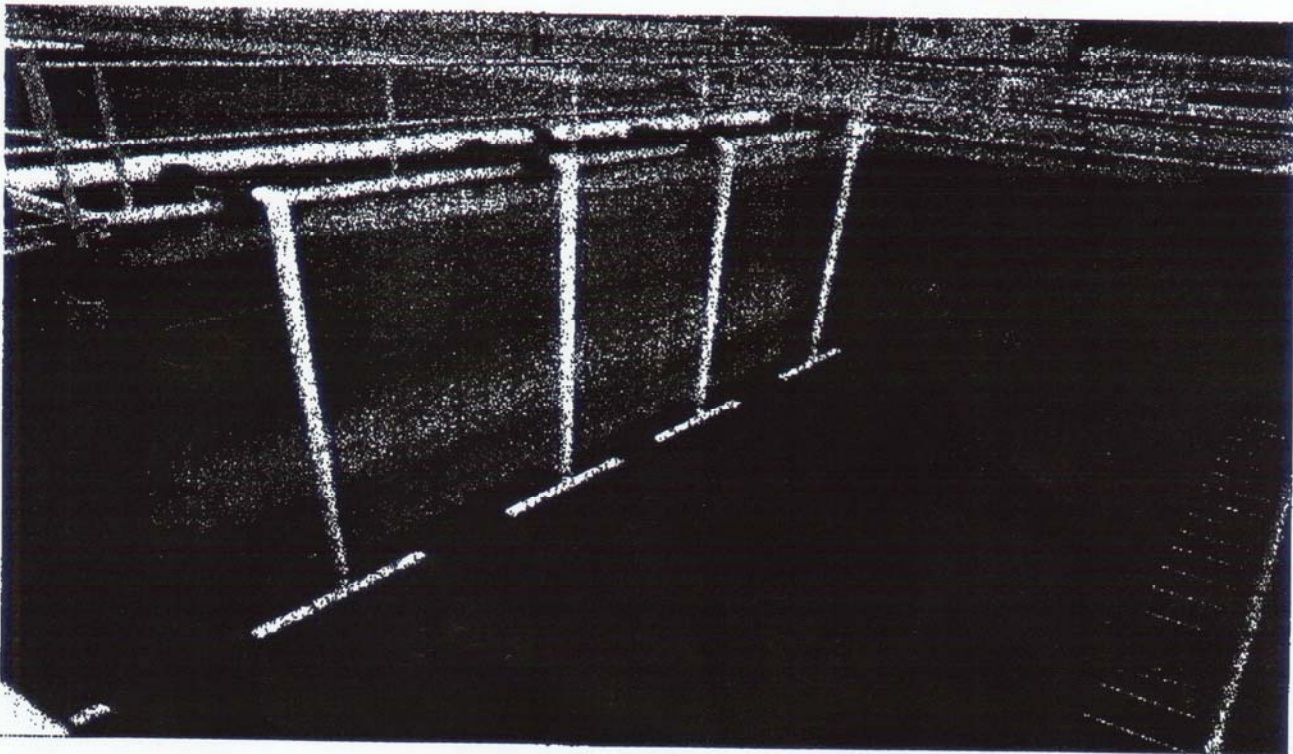
The Lebanon Wastewater Treatment Plant was built in 1979 and expanded to present capacity in October 2000. The Schreiber activated sludge process has a capacity of 6 MGD.

Hydro Mechanics Systems, in cooperation with the City of Lebanon, Ohio, developed and operated a pilot to test and demonstrate the Mazzei AirJection system in one of the city's aerobic digesters. The test was run for nearly a year. The results were very impressive:

- 1) Digestion time was reduced significantly
- 2) Quantity of supernatant was increased several times over the control unit.
- 3) Sludge was considerably thicker than the control basin.
- 4) System was quieter than blower systems.
- 5) Energy consumption savings of up to 20% compared to traditional aeration.
- 6) Sludge removal costs decreased due to supernatant withdrawal and increased sludge cake solids.
- 7) Sludge disposal cost reduction was 3X the power cost reduction.

Sludge companies charge by the wet ton for disposal either by landfill or land application. The higher solids concentration of the sludge dramatically reduces the dry ton disposal cost.

Form of Aeration:	Traditional	HMS-Mazzei @	
Solids as percent of Sludge:	10%	20%	30%
Disposal cost/wet ton:	\$20.00	20.00	\$20.00
Efficiency (Water %):	90%	80%	70%
Disposal Cost/dry ton:	\$200.00	\$100.00	\$60.00



Lebanon Wastewater Plant is operated by The City of Lebanon staff, Johnny Saylers, Chief Operator.

Equipment sponsors include Mazzei Injector Corp., Analytical Technology, Inc. (D.O. analyzer), Corporate Equipment (Gorman Rupp pump) and Harrington Plastics (piping).

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LEBANON STATEMENT

December 21, 2001

To Whom It May Concern:

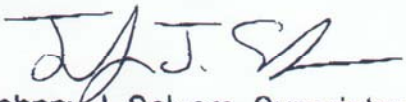
Hydro Mechanics Systems installed the Mazzei AirJection system in aerobic digestion tank #1 in the spring of 2001.

Lebanon operates its aerobic digestors in a batch or fill and draw mode. We ran tank #1 and tank #2 side by side with the same waste activated sludge. Tank #1 with the Mazzei system and tank #2 air diffused air. Tank #1 digested more quickly and produced up to 50% supernatant where tank #2 produced no supernatant.

Belt filter press run with sludge from tank #1 produced the highest sludge cake we have ever produced with very good liquid solids separation. The Mazzei System ran well with very little plugging or maintenance.

If you have any questions about our excellent results using the Mazzei System, please call me at 513-257-3392.

Very truly yours,



Johnny J. Salyers, Superintendent, Wastewater
City of Lebanon, Ohio