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May 19, 2009

Steve Podszus
City of Lincolnville
218 W. Main
Lincolnville, KS 66858

Dear Steve;

As you requested, I conducted a sludge profile of your systems wastewater stabilization ponds on May 6, 2009. The enclosed report summarizes my findings.

We took 14 measurements in the east (primary) cell. The average sludge depth in this cell was 10.71 inches. This cell was being operated at a depth of 5 feet. The loss of capacity due to sludge accumulation is 17.86 percent. The depth of heavy sludge is about 4-6 inches.

Nineteen measurements were taken in the west cell. The average sludge depth in this cell is 9.47 inches, with at least four to six inches of heavy sludge. This cell was also being operated a depth of 5 feet. Loss of capacity in this cell is 15.79 percent.

I do not believe removal is warranted given the limited amount of heavy sludge in the lagoons. Sludge removal is usually only necessary when a system fails to meet discharge permit limits or when the system has constant odor problems. The odors will usually only occur when approximately 25 percent of lagoon capacity is lost due to sludge accumulation. Other factors include system design and capacity. Utilizing irrigation and raising the operating depth to five feet will gain your system some time. Sludge removal project can be a significant expense and should be budgeted for.

I did however observe the dike walls and they have severe erosion. Some of the sludge depth could be due to the erosion adding to depth of sludge in the cells. I highly recommend that erosion control be added to prevent dike failure.

There are monies available through various agencies and I suggest you contact USDA as they will have stimulus monies soon which might be available for this type of work. Please contact Dan Fisher at 785-776-7582 at the USDA RUS office in Manhattan.

Please call if KRWA can be of any further help or provide additional information.

Sincerely,

Charlie Schwindamann
Wastewater Tech

CS: ejr
Enclosure
C: Jane Pigorsch, City Clerk
Marsha Carpenter, KDHE, Salina
Gary Smith, USDA RUS, Topeka

TOP IS NORTH

WEST CELL

EAST (PRIMARY) CELL

18"	10"	10"	10"	12"
12"	12"	12"	10"	10"
12"	10"	12"	10"	10"
12"			10"	12"
12"	12"	12"	10"	12"
12"	12"	12"	10"	10"
12"	12"	12"	10"	14"

CELL OPERATING DEPTH: 5 FEET

CELL OPERATING DEPTH: 5 FEET

AVERAGE SLUDGE DEPTH: 9.47 INCHES

AVERAGE SLUDGE DEPTH: 10.71 INCHES