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July 29, 2010

Reece Roemer
Healy Sanitary Sewer District
2009 N. Spruce
Healy, KS 67850

Dear Reece,

As you requested, KRWA completed a smoke testing of the sanitary sewer system on July 21, 2010. The enclosed report summarizes that work. Enclosed also are two DVD's that better identify the problems and locations.

A total of 25 inflow and infiltration (I&I) problems were identified. They include:

- 14 clean outs
- 3 manholes that we recorded
- 3 places with smoke in the structures
- 1 main line problem
- 3 service lines
- 1 other problem that is identified in the report and on the DVD's

The largest contributors of the inflow and infiltration were those near the pool. These contributors have already been repaired. At the dog pen north of the pool, there are floor drains that drain excess water into the wastewater collection system. These drains should be covered with sand bags or some other material to keep water from entering the drains during rain events.

There are manholes in low-lying areas, such as drainage ditches, that should have the holes in the lid plugged and/or be caulked. These holes have the potential to allow significant amounts of I&I and debris into the system.

Smoke would not travel through the line west of the lift station to Dodge Road. This could be due to a sag in the mainline or a blockage of some type. I suggest you have this section of line videotaped with a sewer camera to determine the problem.

You mentioned that improvements to the drainage ditches will soon be made, which I believe will significantly reduce the amount of inflow and infiltration into the collection system.

We used 2 gallons of liquid smoke to complete the smoke testing at a cost of \$90 per gallon. Total cost of smoke testing is \$180.

Please call if KRWA can be of further assistance. KRWA appreciates the opportunity to provide assistance to your community.

Sincerely,

Charlie Schwindamann
Wastewater Tech

CS:ejr
Enclosure
c: Bill Taldo, Lane County Emergency Management Director
Allen Nichols, KDHE, Dodge City

SANITARY SEWER SMOKE TEST

Healy Sanitary Sewer District

July 21, 2010

Address	Cleanouts	Manhole	Smoke in Structure	Mainline	Service Lines	Other	Comments
Dwight York						x	in bushes- unknown cause
by Carl Jensions		x					manhole needs to be sealed
Cliff McGee	x						clean out needs to be repaired
Joe Ubens	x						clean out needs to be repaired
Mike Pineake trailer house	x						clean out needs to be repaired
Helen Bruiner	x						clean out needs to be repaired
Randy Roemer, trailer house lot					x		service connection needs to be capped
David Walkers, old trailer house lot					x		service connection needs to be capped
Archie Cooly			x				smoke inside and under house
Sharp Farms, trailer by Church	x						clean out needs to be repaired
Kustom Book keeping trailer			x				smoke from under trailer
Huber old house S. of Buffalo Plant			x				smoke from inside house
Problems found on first DVD	5	1	3	0	2	1	
End of first DVD							
SW of wisconsin and Spruce		x					manhole needs to be sealed
Myron Bruiner old house	x						clean out needs to be repaired
Myron Bruiner Trailer house nex to above	x						clean out needs to be repaired
Gail Sharp's mothers house	x						clean out needs to be repaired
school lot across E from Fred Pinkams	xxxx						4 places found smoking
Bill Barnett Sr.	x				x		clean out and either service or main line
drain for pool	x						needs to be sealed or better connection
by lift station		x					smoke from concrete around manhole
between MH by lift station W. to Dodge Road				x			main line problem, sag or plug
Problems found on second DVD	9	2	0	1	1		
25 total problems found	14	3	3	1	3	1	