

May 30, 2007

Corina Cox
NW Kansas Planning and Development Commission
319 N. Pomeroy
Box 248
Hill City, Kansas 67642

Dear Ms. Cox,

I was asked to review a resubmission of an updated plan of work by the City of Downs for a wastewater treatment facility. Greg Olmacher's review of the materials in 2005 indicated a potential issue with shrink-swell soils and with the location of the lagoons in relation to erosion along stream terrace slope. Based on the materials supplied to me, it appears that the engineering company has addressed these issues.

One additional concern that I would have is that the depth to ground water in the area is fairly shallow in T6S R11W secs 27 and 28 at approximately 22 to 28 feet deep as noted in the well log data base maintained at the KGS. In addition, the ground water in the area has a known nitrate problem (Townsend, 1996). With the presence of shrink-swell soils, there is the possibility of leakage when the area is dry and the local soils shrink. The construction of the lagoon should take into consideration the potential of leakage when the soils are dry in the area surrounding the lagoon. I do not know if the project should consider lining the lagoon. I am not a geotechnical engineer. However, if there is a leakage problem, then the water quality in the area south of the Solomon River could be compromised.

If the above recommendations are considered by the engineering firm and acceptable solutions are found, then the project should proceed.

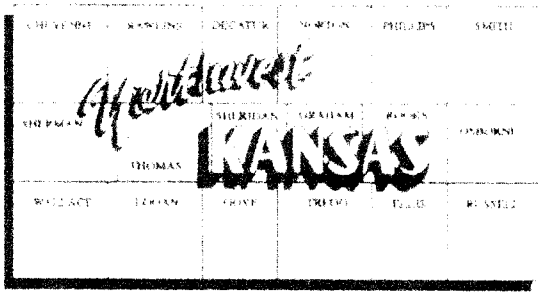
The above comments are based on regional geologic conditions and limited information available to the KGS at the time of writing and cannot be used in substitute for a detailed site characterization. Other geologic conditions, not discussed here, or for which the KGS has no knowledge, may affect the viability or safe operation of this facility or property. Geotechnical engineering and design are outside the purview of the KGS. It is the responsibility of the applicant to produce any detailed site characterizations, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,



Margaret Townsend
Geohydrology Section

Townsend, M. A., 1996, Summary report of work on sources of nitrate-N in ground water, North and South Forks of Solomon River basin: Kansas Geological Survey, Open-file Report no. 96-28, 42 pages



NORTHWEST KANSAS
PLANNING and DEVELOPMENT
COMMISSION
319 N. Pomeroy
Box 248
Hill City, Kansas 67642-0248
(785) 421-2151 Fax (785) 421-3496

Gregory Ohlmacher, P.G.
Kansas Geological Survey
University of Kansas
1930 Constant Avenue – Campus West
Lawrence KS 66047-3726

May 22, 2007

RE: City of Downs
#07-PF-706

Dear Mr. Ohlmacher,

The City of Downs was awarded a 2007 Community Development Block Grant (CDBG) from the Kansas Department of Commerce and has secured a loan through the Kansas Department of Health & Environment (KDHE) to construct a wastewater treatment facility to serve the citizens of Downs, Kansas. Attached is a copy of your response following an environmental assessment of the project conducted by the project engineer, Wilson & Company, Salina, Kansas. The project has been designed and let to bid. The CDBG program requires all environmental responses to be current within one year before they will grant environmental clearance. Your reply is dated July 20, 2005. I need to ensure your agency's response has not changed. Please review your previous reply and either indicate there are no changes or what additional considerations need to be taken. Please be sure to sign your name and fax your response to my attention at (785) 421-3496. I would also appreciate if you could mail the original to my attention as well.

The following was copied from the completed environmental assessment –

The Kansas Geological Survey noted issues of expansive soils and the stability and erosion along the stream terrace slope to ensure they are addressed in the final design. Additionally they noted seepage rates should follow KDHE guidelines. In the preparation of the Contract Documents, the project engineer relied upon the following report of explorations and tests of subsurface conditions at the site within a report dated December 2005, prepared by Geotechnical Services Inc., Wichita, Kansas, entitled: Geotechnical Investigation for the Wastewater Treatment Plant, Downs, Kansas; GSI Job Number 057329. A copy of this report is included in Appendix A of the specifications and addresses site soils and provides recommendations for earthwork compaction. In addition, the lagoons are set back from the terrace slope which makes the stability and erosion a minor concern.

If you have any questions or need additional information, please contact me at your earliest convenience. Any technical engineering questions may be directed to Doug Goetz, Wilson & Company at (785) 827-0433.

Sincerely,

A handwritten signature in black ink, appearing to read 'Corina Cox', enclosed within a faint, hand-drawn oval.

Corina Cox
Economic Development Coordinator

Enclosures

cc: City of Downs (File: Environmental Review)
Doug Goetz, Wilson & Company