Narrative

06/07/2017  LETTER RECEIVED IN OPPOSITION OF SALT WATER INJECTION WELLS IN THE FLINT HILLS FROM REPRESENTATIVE NANCY LUSK AND REPRESENTATIVE ANNIE KUETHER WITH 28 ADDITIONAL SIGNATURES FROM REPRESENTATIVES AND SENATORS REGARDING DOCKET NO. 17-CONS-3484-CUIC.
May 22, 2017

Kansas Corporation Commission
1500 SW Arrowhead Road
Topeka, KS 66604

Dear members of the Kansas Corporation Commission:

We are writing this letter to express our concern of possible adverse consequences if the Kansas Corporation Commission grants a permit to the Quail Oil and Gas to build an injection well in Morris County. In our roles as legislators for the state of Kansas, we have the duty to protect public safety. It is with this charge in mind, that we respectfully urge you to err on the side of caution as you review the evidence presented in the hearing and make your decision.

Whether wastewater is produced from an oil or gas well that uses horizontal drilling ("fracking") to create cracks in the deep-rock formations, or from a non-fractured well where the natural formation of fractured limestone rocks allows retrieval of hydrocarbons without drilling, the resulting wastewater requires disposal.

The byproduct waste fluid will typically contain brine (salt water), and a chemical mixture, initially added to prevent corrosion of the well and lubricate the extraction process. Such chemical mixtures are complex, vary from well to well, and some compounds may pose serious health risks if not properly regulated. Presently the KCC only receives voluntary full disclosures of all the wastewater additives used at any given well.

The injection point under consideration for the proposed Morris County well is near to several freshwater spring sources. Any accident could cause contamination and have a negative impact on ground water and water systems. Those living in the surrounding area are dependent on the KCC's oversight to keep their drinking water safe from leakage contamination.

While most injection wells do not cause felt earthquakes, there are unresolved unknowns. Man induced earthquakes are a relatively new phenomenon and further study is needed to understand their association with wastewater disposal. What is the tipping point of risk for the injection rate of wastewater? What is the tipping point for the total volume of wastewater disposed? How does the proximity of the Nemaha Uplift faults in Morris County affect the earthquake risk factor? What about the risk of wells close to inactive fault lines that scientists do not know exist.
The United States Geological Survey has identified **wastewater disposal as the primary cause** of the recent increase in **earthquakes in the central United States**. Injecting large volumes of water into the deep sedimentary formations can, under certain conditions, counteract the natural "tectonic" stress that holds layers of rock in place and cause fault slip, inducing earthquakes. Unfortunately, currently there is no sure method to anticipate whether a planned wastewater disposal activity will trigger earthquakes that are large enough to be of concern.

With earthquakes, damage to people's property is a possibility but it is difficult to establish liability. Many Kansans have already **suffered damages to their properties without compensation** because of Oklahoma earthquakes. Caution by the KCC is appropriate in seeking to minimize this risk.

We wish to commend the KCC, Kansas Geological Survey, and Kansas Department of Health and Environment for responding to the recent dramatic increase in earthquakes at magnitude 2.7 or higher in southern Kansas and Oklahoma with new caps on injection volumes in sections of Harper, Sumner, Barber, Kingman and Sedgwick counties. After your regulatory actions, the number of **quakes plummeted** from 1,177 in a six-month period in 2015 to only 211 from September 2016 to February 2017, and the magnitude of the quakes also decreased.

We encourage you to use the same proactive oversight in determining the safety parameters for future oil injection well projects near the Flint Hills as was used in south central Kansas. As you know, the **mission of the Kansas Corporation Commission** is to serve the people of Kansas by regulating the State's energy infrastructure, oil and gas production to **ensure public safety**. Please continue to fulfill your obligation to the people of Kansas. We must protect our water, and we must protect Kansas. Thank you for your time and consideration.

Sincerely,

Representative Annie Kuether  
Representative Nancy Lusk

Attachment
Nancy Lusk  
Cindy Neighbor  
Gail Finney  
John Alcala  
Steven Crum  
Brett Parker  
Tim Gartner  
Barbara Ballard  
Sydney Carlin  
Mary Martha Good  
Elizabeth Bishop  
Anta Judd Jenkins  

Nancy Lusk  
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House Dist. #22  
House Dist. #18  
HD #84  
57th  
HD 98  
29th  
53rd  
44th  
66th  
#75  
#88  
Dist #80
DEBBIE DEERE  
JIM WARD  
Patsy Terrell  
Ponka-We Victors  
Pam Curtis  
Jarrod Ousley  
Louis Ruiz  
KC Othabbosin  
Broderick Henderson  
Dennis "Booz" Highberger  
Kitty Waymore  
ED THOMAS  

Debbie Seere  

Pat McGowen  
Ponka-We Victors  
Pam Curtis  

Tom Eby  

Kim Othabbosin  

Broderick Henderson  

Beckie Fred  

Pauline Newman  

Ed Trimmer  

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District 86  
District 102  
District 32  
# 24  
# 31  
# 85  
# 35  
76th District  
# 36  
# 79
Senator Oletha Faust-Goudeau
Senator Marci Francisco
Senator Tom Hawk
Senator Pat Pettey

Representative Mary Martha Good
Representative Anita Judd-Jenkins
Representative Valdenia C. Winn
Representative Cindy Neighbor
Representative Gail Finney
Representative John Alcalá
Representative Nancy Lusk
Representative Annie Kuether
Representative Steven Crum
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Representative Jim Gartner
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Representative Debbie Deere
Representative Jim Ward
Representative Patsy Terrell
Representative Ponka-We Victors
Representative Pam Curtis
Representative Jarrod Ousley
Representative Louis Ruiz
Representative KC Ohaebosm
Representative Broderick Henderson
Representative Dennis "Boog" Highbeger
Representative Kathy Wolfe-Moore
Representative Ed Trimmer