

October 21, 2017

Conservation Division
Kansas Corporation Commission
266 N. Main Street, Suite 220
Wichita, Kansas 67202-1513

RE: JTC Oil Inc. permit for injection of Blunk I-10 and Blunk I-11, Franklin Co, KS

Dear Commissioners Albrecht, Apple, and Emler:

I write in regard to the request of JTC Oil, Inc. for a permit to engage in Enhanced Oil Recovery practices in the Blunk I-10 well and Blunk I-11 well in Section 18, Township 17S, Range 21 E, of Franklin county, Kansas. This section is 3 sections east and 2 sections north of our residence and farm in Franklin county. Our address is 2263 Nevada Road, Ottawa, Kansas 66067. This address is located in Section 28, Township 17, Range 20 of Franklin county, Kansas.

I write to request that the Commission deny permits to JTC Oil, Inc. in this matter. What follows are considerations for my request.

The unincorporated city of Rantoul lies 6 miles to our east. The population of Rantoul is approximately 250 humans. The water supply for Rural Water district 6, Franklin county, Kansas lies 2 miles east of Rantoul, near Rock Creek Road. Two wells are on the south side of the road, one well on the north side. The wells are 23 to 25 feet in depth. These three wells do not appear on the KGS interactive map data. (A geologist I spoke with at the KGS on 10/19/17 said that there are a number of reasons which might explain wells not appearing on the interactive mapping tool; I won't go into those here.) In addition to supply from these three wells, Rural Water 6 pumps water from the Marais des Cygnes river, which lies immediately east of the three wells, into a holding pond. The pond is a settling pond; from there, the pond, water is sent to the Rural Water 6 treatment plant. Rural water 6 has about 1,000 meters and serves about 3,000 people. The city of Rantoul has its own city wells; it is not served by Rural Water 6. Two of Rantoul's wells are close to the Marais des Cygnes river, KGS well #329503 and KGS well #21686. The third well is located on the northwest edge of the town, is 42 ft. deep, and is KGS well #364866. 5 of the 6 wells described above are close to the Marais des Cygnes river and are down river from JTC Oil, Inc.'s proposed injection wells, particularly the Blunk I-11 well, which lies about 200 ft. east of the Marais des Cygnes at location LONG 95.1215698 and LAT 38.5679155. The proximity of these six water wells to the proposed injection sites leads to a number of concerns:

- A. There is a long history of oil and gas drilling in the areas described above. In these areas there is a history of poorly plugged wells, leaking oil wells, abandoned wells, and unrecorded wells (rather more like the unrecorded water supply wells of Rural Water 6). I

am acquainted with some of this history by virtue of being a member of the Regional Advisory Committee of the Marais des Cygnes Watershed Region, a committee formed by the Kansas Water Office to implement the Governor's 50 Year Water Vision for this region of Kansas. At our meetings we hear reports from KWO's staff regarding river and reservoir operations, conditions existing at non-state water impoundment lakes, and, from Abandoned Well Coordinators. These Coordinators have reported frequently on oil well leaks near Rantoul. These reports are in the logs of the Abandoned Well Coordinators. I am appealing to these logs in the Commission's considerations for JTC's permitting. I likely can access such logs via the Freedom of Information Act, yet, since the Abandoned Well Coordinators are employees of the KCC, I trust the KCC to examine such logs. The reasoning here is this: the Blunk I-10 and I-11 wells are in a flood plain; there are multiple known oil wells, probable unknown wells, many of which wells' integrity is marginally known. This is a frequently flooded area, the structural conditions of wells not currently known is sometimes revealed by pressures of current EOR practices. This is so because: a) the old, undocumented wells have penetrated the impermeable geologic layers between clean water sources, and, b) seismic activity may have compromised these impermeable layers. In the event either of these cases the risk is transferred from JTC Oil, Inc. and the KCC to the 3,000 users of Rural Water 6 and the 250 citizens of Rantoul. This risk of clean water compromise is transferred specifically because the conditions of the production casing, cement, and the integrity of nearby plugged wells is often not known. And, in the end, the realized pressures (500 PSIG and a maximum of 400 bbls per day) are an experiment in which 3,250 humans' health and well-being are at risk, and the probabilities of such risk cannot be expressed by a metric.

- B. A second consideration is seismic activity as a result both well injection and water deposition into Class II wells. The injection waters in EOR operations ultimately lead to deposition of these waters into class II well sites. There are a number of papers which conclude that seismic activity may be induced by these injection and deposition practices. And, there is reported seismic activity in the Forest City Basin. This activity can be found at Earthquaketrack.com and on the interactive map of the Kansas Geological Survey. And D.L Baars (Kansas Geological Survey in Basement Tectonic Configurations in Kansas, 1995) notes a dextral strike fault slip in the Precambrian basement running Northwest to Southeast through Franklin county. Here is my point: induced seismicity is a relatively new conception and the corporation commissions of Kansas, Pennsylvania, Oklahoma, are playing catch-up. "Catch-up" means that law is a backward-looking conceptual process which responds post hoc to novel events. Two Kansas Corporation Commissioners are trained in law; not one is trained in science. I wish to demonstrate to the Commission the extent to which the procedures of the Commission in regard to EOR practices and the practice of waste water disposal in Class II wells harms some Kansans. My wife and I own five residences, two in Franklin county, two in Prairie Village, Kansas, one in Leawood, Kansas. One of these is our residence, 4 are rental properties. The addresses of these properties are: 2263 Nevada Road, Ottawa, KS 66067, 3332 Rock Creek Road, Ottawa, KS 66067, 4836 W. 76th St., Prairie Village, KS 66208, 7939 Falmouth, Prairie Village, KS 66208, and 9833 Overbrook Road, Leawood, KS 66210. The market value of these properties is \$1.2

million. Our insurance carrier is State Farm. State Farm's HO-2414 Earthquake and Volcanic Explosion Endorsement specifically excludes "earth movement, meaning the sinking, rising, shifting, expanding, or contracting of earth" due to 'natural resource extraction activities.' (Attachment appended to this letter.) Free market advocates would have me switch my insurance coverage of the properties listed above to a company which provides protection in the event seismic activity were caused by natural resource extraction activities. Such companies do exist but they often do not have the financial assets of State Farm. And part of the reason State Farm has such impeccable asset value is that it excludes seismic damage due to natural resource extraction activities from coverage. This is my interpretation: JTC Oil, Inc. is engaged in a for-profit activity, this activity entails seismic risk, drinking water risk, this risk of borne by persons who happen to live in the region, who happen to have capital investment in the region. Further, the burden of risk is asymmetrical since the licensing requirements, fine structures for EOR activities are relatively small pains in relation to the documented actual and potential harm.

- C. KCC's Form C-1, "Notice of Intent to Drill" ask for information regarding water wells within ¼ mile and public water supply wells within 1 mile. In the case of JTC Oil, Inc.'s application the public water supply distances are as follows: KGS well 21686=1.5 mi; KGS well 364866=2mi; KGS well 329503=2.75 mi; Franklin county rural water 6 wells=3.25 mi. KCC does not require a drilling applicant to submit water samples from any nearby water wells, public or private. Some states require that water samples be submitted with the application. For instance, Ohio law requires that an applicant submit water samples from all known water wells within 300 ft. of the proposed well. My suggestion is that the KCC require applicants to submit water samples from known private and public water supplies and that the distance from the drilling site be a function of geologic formation, history of seismic activity in the area, likelihood of flooding, and type of drilling activity proposed. In the case of JTC's application, the well sites are in a frequently flooded area, 5 public water supply wells exist downstream from the Blunk I-11 EOR activity, and Blunk I-11 is 200 ft. from the Marais des Cygnes river.
- D. JTC Oil, Inc. does not specify in its application the means it will employ to bring water to the Blunk I-10 and Blunk I-11 well sites. This is a consideration because the KCC fined JTC Oil, Inc. \$2,900 on October 20, 2015 for Kansas Motor Carrier violations. In the event JTC Oil, Inc. were to truck injection fluids to the well sites then such transportation would be undertaken by a company which has a blemished stewardship record, stewardship specifically related to transportation and under the supervision of one Ms. Terri Gratwick, Office Manager of JTC Oil, Inc. who was Office Manager at the time of infractions in 2015 and who remains Office Manager. Further, JTC Oil, Inc. was fined \$15,000 for violations of K.A.R. 82-3-400 or K.A.R. 82-3-409; this fine through settlement was reduced to \$7,500 on February 17, 2016. These violations relate to injection pressures which exceeded the existing permit. The docket in this case is 16-CONS-039-CPEN. An additional violation is documented in 17-CONS-3680-CPEN; here, KCC fined JTC, Oil Inc. \$6,000 for violations related to Day J and Day C wells Linn county and Cook wells in Miami county. These violations relate to JTC Oil, Inc. failing to conduct Mechanical Integrity Tests on injection wells. Additionally, docket 15-CONS-511-CPEN details a fine of \$200 imposed on JTC Oil, Inc.

for failing to file a fluid injection report. The date of this last fine is January 13, 2015. Here is my conclusion: JTC Oil, Inc. has a chronic history, as demonstrated by KCC's public orders, of serious violations which threatened clean water. Given JTC Oil, Inc.'s proposal to engage in EOR practices in a sensitive groundwater area near the Marais des Cygnes river, and, its grievous record related to injection practices, its current application should be denied.

- E. JTC Oil, Inc.'s Exploration and Production Waste Transfer report (Form CDP-5) indicates that drilling waste was not transported from Blunk I-10 and Blunk I-11 well sites. These wastes were placed in the approved drilling pits with native clay linings. On completion of drilling the pits were air dried and then backfilled. I do not find evidence that these wastes comply with NORM/TENORM standards for exempt wastes. The exemption standard is <5pCi/g. The KDHE sets these standards but I do not see a compliance record or even evidence of sampling of the wastes from either Blunk I-10 or Blunk I-11. Both well's backfilled drilling wastes are in a frequently flooded plain of the Marais des Cygnes river and 5 public water intake wells are located within 3.25 miles, downstream and in close proximity to the river.
- F. The process by which the KCC permits oil drilling is biased for issuing permits and against denying permits. The reasoning is this: KCC evaluates permits on an individual basis. KCC's form "Notice Intent to Drill" form queries the petitioner regarding each well's specifics, the operator's history of infractions, and so on. Yet, there is a large body of literature which claims that seismic activity and water quality are related to drilling activities in a field, in a geologic formation. I know that the KCC recognizes this organic nature of extraction activities since the KCC issued orders covering Harper and Sumner counties. However, the general methodology of the KCC's assessment process focuses on individual wells and applications. For instance, KCC's "Notice of Intent to Drill" (Form C-1) queries about water supplies within 1 mile of the proposed well. The form does not query regarding: number of oil wells within the region, the history of abandoned wells or poorly plugged wells in the area which have been located by KCC's Abandoned Well Coordinators, the proximity of public water containments (lakes, reservoirs). Harper and Sumner counties seem to teach this: assessing a permit on its individual merits is a mistake; each well exists in a dynamic geologic context and humans are altering the context in novel ways.
- G. The Oklahoma high court in June of 2015 ruled that Oklahoma district courts have jurisdiction on private tort suits. My prediction is that if the KCC does not offer administrative relief to those of us who are put at risk by companies like JTC Oil, Inc. and Quail Oil then we will seek relief through juridical processes. In Oklahoma, both the OCC, the state, and individual companies are defendants in a number of suits. The KCC needs to move an inch or two in the matters I've noted above. There is room in existing law for the KCC to do so.

If the KCC will grant a hearing in the Quail Oil docket 17-CONS-3484-CUIC and/or the Quail Oil, Inc. application I can say that a group of us will come forward to the KCC with a set of workable proposals with which the KCC can work.

Cordially,

Scott Yeargain
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Ottawa, Kansas 66067
785-418-7615

Enclosure

State Farm Endorsement

HO-2414 EARTHQUAKE AND VOLCANIC EXPLOSION ENDORSEMENT (Homeowners) This endorsement modifies insurance provided under the following: HOMEOWNERS POLICY The following is added to SECTION I – ADDITIONAL COVERAGES: Earthquake and Volcanic Explosion. We will pay for accidental direct physical loss to covered property resulting from an earthquake or volcanic explosion when the loss is directly and immediately caused by: a. ground shock waves; b. ground tremors; c. ground liquefaction; or d. damaging amplification of ground motion; subject to the following: (1) We will not pay for, under this endorsement, loss arising from earthquake activity or volcanic explosion that begins before the inception of this endorsement. But, if this endorsement replaces earthquake insurance that excludes loss that occurs after the expiration of the policy, we will pay for loss covered by this endorsement due to an earthquake or volcanic explosion that occurs on or after the inception of this endorsement, if the series of earthquake shocks or tremors or volcanic explosions began within 168 hours prior to the inception of this insurance. (2) All earthquake activity or volcanic explosions that occurs within any 168-hour period will constitute a single loss. The expiration of this policy will not reduce the 168-hour period. (3) Deductible: The deductible for loss caused by earthquake or volcanic explosion is the amount determined by applying the Earthquake deductible percentage (%) shown in the Declarations, to the COVERAGE A – DWELLING limit shown in the Declarations. This deductible applies to all losses covered under this endorsement. The deductible will be subtracted from the total amount of the loss and will apply in place of any other deductible stated in this policy. (4) This coverage does not increase the limit applying to the damaged property. For the purposes of this endorsement only SECTION I – LOSSES NOT INSURED, 2.b. Earth Movement is replaced with the following: b. Earth Movement, meaning the sinking, rising, shifting, expanding, or contracting of earth, all regardless of whether combined with water, sewage, or any material carried by, or otherwise moved by the earth. Earth movement includes but is not limited to: (1) earthquake, except as specifically provided in SECTION I – ADDITIONAL COVERAGES, Earthquake and Volcanic Explosion; (2) landslide, mudslide, or mudflow; (3) sinkhole or subsidence; (4) movement resulting from: (a) improper compaction; (b) site selection; (c) natural resource extraction activities; (d) excavation; (5) erosion; (6) pressure by surface or subsurface earth or fill; or (7) any volcanic activity, except as specifically provided in SECTION I –

ADDITIONAL COVERAGES, Volcanic Action or SECTION I – ADDITIONAL COVERAGES, Earthquake and Volcanic Explosion. However, we will pay for any accidental direct physical loss by fire resulting from earth movement, provided the resulting fire loss is itself a loss insured. All other policy provisions apply.

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