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To: [Beardsley, Michelle](#); [Kim Steves \[KDHE\]](#)
Subject: [External_Sender] License Condition questions.
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Michelle

I wonder if I can answer the questions in an email. Specifically the department's approval of the exemption is based on the radioactive source, Sc 46 that lost in a storage cavern and the nature of the storage cavern. Because it is a storage cavern there will be no drilling in the area, there is no water table impacted and it is stable geology. The risk to the public is pretty much zero for these factors. It would be very costly from an economic standpoint to force the closure of the storage tank over the lost source, but the closure of the storage tank is not going to improve the public health and safety over not closing it.

The regulation specifically exempted will be the requirement to abandon the well and the associated process. The Kansas Reg is:

- d) If it becomes apparent that efforts to recover the radioactive source will not be successful, the licensee shall meet the following requirements:
- (1) The licensee shall advise the well operator of the following requirements regarding the method of abandonment:
 - (A) The well operator shall immobilize and seal the radioactive source in place with a cement plug.
 - (B) The well operator shall set in place a whipstock or other deflection device.
 - (C) The well operator shall mount a permanent identification plaque at the surface of the well, containing the appropriate information required by this regulation.

The cavern is considered stable by Geologists in KDHE. They would not be permitted as storage containers if they lacked stability. We are only including the provisions for collapse just to be thorough. I don't think an earthquake could collapse these mines because of how salt formations behave.

And the required monitoring is a gamma log down hole to verify the source is not moving.

The intent is to have the license for the well until the source has decayed past 10 half lives then terminate the license. This will be possible given the relatively short half life of Sc46.

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