

MINUTES OF THE SENATE UTILITIES COMMITTEE.

The meeting was called to order by Chairman Senator Stan Clark at 9:30 a.m. on February 27, 2001 in Room 313-S of the Capitol.

All members were present except:

Committee staff present: Raney Gilliland, Legislative Research
 Tom Severn, Legislative Research
 Bruce Kinzie, Revisor of Statutes
 Ann McMorris, Secretary

Other Legislators sitting with the committee:

 Senator Dave Kerr
 Rep. Laura McClure
 Rep. Janice Pauls
 Rep. Mary Kauffman
 Rep. Carol Beggs
 Rep. Joann Freeborn
 Rep. Joe McLeland

Conferees appearing before the committee:

 Dr. Joe Ratigan, Consultant, Houston
 Dr. Lee Allison, Kansas Geological Survey
 Karl Muedener, Kansas Department of Health and Environment
 Gene Dubay, President, Kansas Gas Services
 John Rose, Northern Natural Gas, Omaha
 Bill Diamond, Solution Mining Research Institute, Encinitas, CA

Others attending: See attached list

Chairman Clark opened the session and introduced President of the Senate Dave Kerr. Senator Kerr welcomed the presenters. He told those present that we need to know if Kansas has in place the laws, regulations and monitoring of natural gas storage to be able to tell Kansans that living in the vicinity of this type of storage is safe. This hearing today is for the purpose of gathering information on all aspects of natural gas storage.

Underground Solution-mining and Hydrocarbon Storage

Joe L. Ratigan, Ph.D., consulting Geologic Engineer, Senior Vice President and Principal Consultant for Sofregaz US, a hydrocarbon storage engineering and construction firm in Houston, TX. He began providing consulting services to the City of Hutchinson on January 19, 2001. He described the technology of storing liquid and gaseous hydrocarbons in solution-mined salt caverns, the state regulation of such technology, and the Kansas regulations and how they compare to those in other states. His belief is that Kansas needs to revise their rules for underground storage of hydrocarbons. He further provided a brief description of (1) North American salt formations, (2) salt as a construction material, (3) solution mined caverns for hydrocarbon storages, and (4) the history of regulation and regulations in other states.

In discussing Kansas regulations, the KDHE rules for underground storage wells and caverns are contained in Kansas Administrative Regulation 28-45. The significant weaknesses in the KDHE rules are (1) the rule does not require a Mechanical Integrity Test nor does it require any sort of casing inspection log; (2) it does not address the reentry or drilling out of plugged and abandoned wells; (3) it does not address how close caverns can be to one another and this is important for pressurized gas storage caverns; (4) it does not require Emergency Shutdown Valves at the wellhead; (5) it requires minimal information to be reported to KDHE by operators compared to other states. He noted KDHE has been working for several years with industry to revise the rules. He offered several questions that should be addressed in studying revision of Kansas regulations. (Attachment 1)

Geology of Natural Gas Pathways and Accumulations under Hutchinson, Kansas

Dr. Lee Allison, Ph.D, R.G., State Geologist and Director, Kansas Geological Survey, University of Kansas, noted Kansas Geological Survey's role in the Hutchinson situation was to conduct geological investigations. He displayed large charts of the geographic strata and explained the information gained from 3.5 mile seismic reflection line and a 1/4 mile line in Hutchinson. (Attachment 2)

Information on Hutchinson Gas Incident

Karl Mueldener, Kansas Department of Health & Environment Bureau of Water, described Kansas facilities, regulatory program history, history of wells, state regulatory authority and regulation plans. (Attachment 3)

Kansas Gas Service Company

Eugene Dubay, President, Kansas Gas Service Company, talked about the role that natural gas storage plays in the timely, cost-effective distribution of natural gas to consumer. Throughout the Hutchinson crisis, KGS was committed to (1) ensuring the community's safety by investigating any potential natural gas leaks and drilling vent wells in the area; (2) returning the evacuees to their homes as soon as safely possible; and (3) determine what caused natural gas to be present below Hutchinson and to fully understand that chain of events that led to the two explosions. (Attachment 4)

Natural Gas Storage Service

John Rose, Senior Reservoir Engineer for Northern Natural Gas, addressed the development and operation of their two natural gas underground storage facilities in Kansas located near Lyons and Cunningham which originally were producing natural gas fields. (Attachment 5)

Solution Mining Research Institute, Inc

Bill Diamond, executive director of Solution Mining Research Institute, Inc., felt a key step to preventing another happening like Hutchinson, will be updating the Kansas rules for underground storage of Hydrocarbons. His opinion was that the investigation needs to be conducted by an organization that is able to subpoena witnesses and obtain records. He provided a background on SMRI and offered assistance in both the investigation and rule making. (Attachment 6)

Chairman opened for questions.

Questions were posed on:

- (1) number of wells per professional
- (2) separate regulations for three types of underground storage
- (3) study on new regulations started in 1996 - what progress has been made
- (4) monitoring system used by Kansas
- (5) Does KDHE ask for ideas from the industry?
- (6) Determining integrity of pipelines under pressure
- (7) Internal regulations of industry in addition to rules and regulations of the area.

Dubay agreed to provide a copy of the internal regulations of his company to the committee.

- (8) What period of time is covered in getting new regulations approved?
- (9) What role does FERC have? Do they inspect. No - they set rules and regulations only on pipelines operating in interstate commerce. There is some overlap between KCC and FERC.
- (10) What monitoring time schedule is included in the rules and regulations? KDHE related various time periods for various categories.
- (11) What agencies are involved in other states? Department of Natural Resources in most.
- (12) Discussed the time lapse between the first indication of trouble in Hutchinson and the actual happening.
- (13) Number and type of storage areas that are under the regulation of KCC.
- (14) Who owns Yaggy? Mid Continent Market Center.
- (15) How were the regulations divided between KCC and KDHE?
- (16) Are more detailed statutes needed? Statutory authority is in place.
- (17) What regulatory body has the most stringent rules, regulations and guidelines?

KDHE has asked other states for their rules but no comparison study has been made.

- (18) What were the symptoms of the Hutchinson trouble? Pressure drop. Discussion on the steps taken to isolate the cause of the pressure drop.
- (19) What formula is used to determine rate of movement of the gas? Dr. Allison responded.

(20) Discussed fracture gradient tests.

(21) Are there any warning systems that would notify the immediate populace? None.

(22) Discussed devices and systems used to locate abandoned wells. .

Chairman Clark announced the committee would next meet on February 28 to discuss further the information presented and to possibly make a series of recommendations to the appropriate state agency and study funding.

Adjournment.

Respectfully Submitted,

Ann McMorris, Secretary

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