

NORTH DAKOTA LEGISLATIVE MANAGEMENT

Minutes of the

**ENERGY DEVELOPMENT AND TRANSMISSION COMMITTEE**

Tuesday, April 8, 2014

Norsk Room, State Fair Center, State Fairgrounds, 2005 Burdick Expressway East  
Minot, North Dakota

Senator Rich Wardner, Chairman, called the meeting to order at 9:00 a.m.

**Members present:** Senators Rich Wardner, John Andrist, Kelly M. Armstrong, David Hogue, Philip M. Murphy, Connie Triplett; Representatives Tracy Boe, Chuck Damschen, Ben W. Hanson, Todd Porter, Mike Schatz, Peter F. Silbernagel

**Others present:** Dick Anderson, State Representative, Willow City  
Roger Brabandt, State Representative, Minot  
Jessica Haak, State Representative, Jamestown  
Karen K. Krebsbach, State Senator, Minot  
Oley Larsen, State Senator, Minot  
Scott Louser, State Representative, Minot  
David O'Connell, State Senator, Lansford  
Roscoe Streyle, State Representative, Minot  
John M. Warner, State Senator, Ryder  
Representatives Marvin E. Nelson and Kenton Onstad, members of the Legislative Management, were also in attendance.

See [Appendix A](#) for additional persons present.

**It was moved by Senator Armstrong, seconded by Representative Silbernagel, and carried on a voice vote that the minutes of the March 4, 2014, meeting be approved as distributed.**

**SALT SPILLS, PREVENTION, AND REMEDIATION**

Galen Peterson, Farmer and Landowner, Maxbass, provided written testimony ([Appendix B](#)) on produced brine water spills.

In response to a question from Chairman Wardner, Galen Peterson said the picture of the spill is of a producing well.

Mr. Pete Artz, Farmer and Rancher, Antler, provided written testimony ([Appendix C](#)) on a pipeline rupture discovered in August 2013 in western Bottineau County. He said the state needs to protect the land for future generations.

In response to a question from Representative Silbernagel, Mr. Artz said he lost five calves in the associated unreclaimed pits for oil wells drilled on his property in 2009.

In response to a question from Representative Onstad, Mr. Artz said the size of the pipeline spill is at least 15 acres and could be larger. He said the spill was first noticed in August 2013.

In response to a question from Chairman Wardner, Mr. Artz said the pipeline went to a disposal well that was created in the 1980s. He said there is regulation but no policing.

In response to a question from Representative Onstad, Mr. Artz said Farm Credit Services will not provide a mortgage on land with a saltwater spill on it.

In response to a question from Senator Andrist, Mr. Artz said he does not think it is possible to completely reclaim the salt spills. He said the pipeline company has put down tile but has not pumped the collected water. He said there seems to be no repercussions for spilling. He said the land can no longer provide a return on investment. He said the land is only good for grass, not farming. He said future generations will not be able to farm. He said there needs to be a better system that provides protection, not necessarily more regulation. He said flow lines need to be monitored. He said severe punishment should be in place.

Mr. Darwin Peterson, Farmer and Landowner, Antler, provided written testimony ([Appendix D](#)) and provided written testimony ([Appendix E](#)) by his son Mr. Matthew Peterson. He said his farmland was affected by one of the largest saltwater spills in this state. He said the installation of the pipeline was rushed, non-engineered, random, and unprofessional. He said remediation efforts are lacking.

In response to a question from Chairman Wardner, Mr. Peterson said the spill on his farmland is approximately 25 acres. He said the size changes over time. He said 13 of the acres are wetlands. He said all of the land has been farmed at certain times.

In response to a question from Senator Andrist, Mr. Peterson said he rents the land that has the spill. He said there has been lost productivity. He said he rents the land from a distant relative with a long-term relationship. He said the landowner was offered compensation but wanted the land returned to the level of productivity that it had before the spill.

In response to a question from Representative Silbernagel, Mr. Peterson said the leak was in a flow line that goes from wells to a disposal site. He said the line was installed in October 2010, and the leak was found in July 2011. He said remediation began in October 2011. He said a desalt product was used for remediation. He said the product has been used twice. He said the productivity of the land has not returned. He said State Department of Health tests show the water in the area has high salinity.

In response to a question from Representative Porter, Mr. Peterson said the landowner had the mineral acres and pumping wells three-quarters of a mile away. He said there is no production on the land with the leak.

In response to a question from Chairman Wardner, Mr. Peterson said Petro Harvester owns the line, which it purchased from Sagebrush. He said Petro Harvester made a poor purchase.

In response to a question from Senator Triplett, Mr. Peterson said the leak is on the west half of Section 5 of Range 161, Township 83.

Mr. Todd Streich, Farmer, Bottineau County, presented written testimony ([Appendix F](#)) on salt damage that occurred on wells drilled in the 1950s and 1960s.

In response to a question from Chairman Wardner, Mr. Streich said farming is not working to remove the salt.

In response to a question from Senator Murphy, Mr. Streich said drain tile has not been installed and would be very expensive to install.

In response to a question from Representative Porter, Mr. Streich said he rents the land from the North Dakota State University Development Foundation, and the rental rate is \$45 an acre. He said the county average is about \$45 to \$50 per acre.

In response to a question from Representative Silbernagel, Mr. Streich said some of the salts in the area are naturally occurring, but the salt in question is from the wells because naturally occurring and well-spilled salts are chemically different.

Mr. Gregory G. Tank, Farmer, McKenzie County, presented written testimony ([Appendix G](#)) on reclamation of well site pits.

In response to a question from Representative Onstad, Mr. Tank said the well was removed from bond by the Industrial Commission. Once a well is released from bond, he said, it is very difficult to get the company to clean up the site.

In response to a question from Senator Triplett, Mr. Tank said the Industrial Commission said it did not have money to reclaim the sites. He said there was some reclaiming done by the Industrial Commission when he got his farming equipment hooked up in the underground equipment on the site. He said there was a \$150,000 bond on the site, and that money was not spent to clean up the site.

In response to a question from Chairman Wardner, Mr. Tank said the reserve pits were trenched out instead of being hauled out. He said the Industrial Commission ordered the site to be cleaned up, but the operator just trenched deeper.

Mr. Larry Peterson, Farmer, Contract Oilfield Pumper, and Land and Mineral Owner, Antler, presented written testimony ([Appendix H](#)) on the need for more enforcement and stiffer penalties for spills.

Mr. Bob Grant, Northwest Landowners Association, Berthold, provided information to the committee. He said there needs to be baseline information on which to base reclamation. He said saltwater is the death of the land. He said landowners do not want to give easements for saltwater pipelines because of the liability. He said the landowner's failure to give easements is not all fatigue but includes being scared of spills. He said the state should protect all natural resources, including the land. He said landowners need a place to go when there is a spill.

In response to a question from Representative Onstad, Mr. Grant said there should be different standards for different types of pipelines. He said the effects of saltwater in high concentration destroys the land. He said salt follows the water table down, and then when the water table comes back up, the soil is bad again after it has been reclaimed. He said Farm Credit Services will not loan money for land that has salt spills on it.

In response to a question from Senator Triplett, Mr. Grant said he is a fourth generation farmer, and other areas of the country work better with the oil industry than the oil industry works with farmers in this state. He said farmers can work together with the oil industry.

Mr. Marvin E. Nelson, Agricultural Consultant, gave a presentation ([Appendix I](#)) on an agricultural perspective on reclamation of salt-affected land. He said records are not updated, and a 300-gallon spill is always a 300-gallon spill. He said saltwater wells are inspected every five years. He said an injection well may be used past failure. He said this state records the barrels of the spill, not the concentration of salt in the spill. He said reclamation of a spill is done the same regardless of the concentration of salt.

In response to a question from Representative Schatz, Mr. M. Nelson said the Bakken wells are very salty. He said shrinking and swelling clays are most affected by salt. He said this state has the saltiest water and the most shrinking and swelling clays. He said there needs to be 6 inches of water to reduce the salinity by 50 percent and 12 inches of water to reduce the salinity by 80 percent through leeching. He said there needs to be 20 inches to 30 inches of water on land to reclaim it in western North Dakota. He said the salt level needs to be 1 percent for 100 percent reclamation for wheat. He said every crop loses yield at 2 percent salt. He said for proper remediation, the level of salt needs to be known so the proper level of calcium can be applied. He said if one well uses 10 million gallons of water to produce oil, water can be used to leach salt out of the soil.

In response to a question from Senator Murphy, Mr. M. Nelson said there needs to be drain tile when the field is flooded.

Senator Triplett said if there is a spill, landowners should call the local sheriff.

Senator O'Connell provided information to the committee. He said there are mostly good operators, but there are a few bad operators. He said the loss of revenue on salt-affected lands is horrendous. He said older wells have changed ownership many times, and it is difficult to find the responsible party.

Mr. David Hynek, Commissioner, Mountrail County, provided information to the committee. He said the recording of the location at the county recorder of dry cuttings pits is required to be done by law. He said this does not happen. He said the size of the pits is a problem. He said as multiwell pads are used, the pits will get larger. He said a pit for three wells is 50 feet by 120 feet. He said 14 wells have been approved for one pit. He said this is not a pit; this is a landfill. He said the county found 30 filter socks by the road and had to dispose of them at the expense of the county. He said there needs to be stiffer penalties, in-state facilities, and monitoring for filter socks.

In response to a question from Representative Onstad, Mr. Hynek said the six-month moratorium for special waste landfills in Mountrail County ends May 26. He said special waste landfills are used for dry cuttings and are probably necessary if properly placed.

In response to a question from Senator Andrist, Mr. Hynek said if done right, cuttings pits can be safe. He said a special waste landfill is willing to work with the county for a demonstration project to use cuttings for road surface. He said the types of cuttings that may be used are limited because the cuttings may be contaminated.

In response to a question from Senator Triplett, Mr. Hynek said special waste landfills are for drill cuttings and contaminated soil, not radiation. He said he thought the decision on May 26 would be to possibly locate two special waste landfills.

In response to a question from Representative Nelson, Mr. Hynek said the filter sock issue at Noonan is being investigated by the state.

In response to a question from Senator Triplett, Mr. Hynek said a letter was sent to oil companies by the Industrial Commission telling the oil companies of the law to record cutting pits with the county recorder. He said the county recorder has mailed letters to the Industrial Commission saying the recordation is not happening.

Senator O'Connell said emergency managers are not allowed to go to the site of a spill. He said they are told to leave and that they are trespassing. He said state law should clarify who has authority to go onsite when there is a spill.

Mr. Don Nelson read an email ([Appendix J](#)) from Mr. Fintan Dooley, Coordinator, Salt Contaminated Land and Water Council, Milwaukee, Wisconsin. Mr. D. Nelson said he was concerned about the amount of freshwater being used for oil development. He said there needs to be a cost-benefit analysis of oil development, and the costs need to be addressed. He said he later found out about the saltwater problem in Bottineau County. He said there does not need to be many more laws but enforcement of the present laws. He said there are salted lands across the United States. He said we have an opportunity to address the salted lands because there is money available. He said we should address the old problems and save money for the new problems. He said there should be an accounting of the acres affected by salt and remediation.

Mr. Ed Murphy, State Geologist, North Dakota Geological Survey, gave a presentation ([Appendix K](#)) on reserve pit and brine pond studies in North Dakota.

In response to a question from Senator Triplett, Mr. E. Murphy said the estimated cost for drain tile and saltwater disposal for a site in the 1985 study was \$25,000.

In response to a question from Representative Onstad, Mr. E. Murphy said the productivity changes shown on Google Earth as to old well sites and roads relates to compaction. He said compacted roads hold water differently from the natural surface of the land. He said he does not study soils. He said he studies the subsurface. He said he does not know how deep one would have to go to release compaction. He said it would depend on the soil.

In response to a question from Senator Murphy, Mr. E. Murphy said a backhoe with a special extension can place drain tile 20 feet deep.

In response to a question from Representative Nelson, Mr. E. Murphy said fly ash is not used in brine ponds because solidification was required in the 1980s, and brine ponds were virtually gone. He said the benefit of solidification is that the pit can be kept in place and reclamation is quicker.

Mr. Paul Lohn, President, Pipeline Controls, L.P., The Woodlands, Texas, presented information on pipeline monitoring systems. He said metering is done for custody transfer and for material balance. He said metering looks for errors, and some errors are leaks. He said there is a lag time from the leak to finding the leak. He said when there is a leak, there is a temperature change and there is a noise change because of the pressure differential. He said by noise, a monitoring device can tell if there is digging near the line. He said his system uses fiber optic cables surrounding the pipeline.

In response to a question from Chairman Wardner, Mr. Lohn said the data gathered from the fiber optic cable can go anywhere there is cell phone service. He said the cost is approximately \$300,000 per mile.

In response to a question from Senator Armstrong, Mr. Lohn said the system is not affected by temperature.

In response to a question from Senator Murphy, Mr. Lohn said his system would double the cost of a four-inch pipeline and is only cost-effective for large pipelines.

In response to a question from Representative Silbernagel, Mr. Lohn said the system is a 35-mile system that can be multiplied.

## RIGHT OF WAY

Mr. Ron Ness, President, North Dakota Petroleum Council, provided information on the right of way task force made up of government representatives, landowners, and industry. He said there needs to be more pipelines in the ground. He said landowner fatigue and other concerns make it difficult to obtain easements. He said pipelines reduce trucks on the road and flaring. He said the task force has made a list of issues, including communication and respect for the landowner, construction standards, monitoring, and a consolidation of pipelines in the same

right of way. He said last legislative session, House Bill No. 1333 provided for all gathering pipelines to be regulated. He said the bill provided for a mapping system. He said the bill provided for a cleanup fund that was capped at \$75 million and was broad enough to provide for funds for the Noonan filter sock issue. He said the cleanup fund used to come from permitting fees and was related to the pad. He said the legislature should look at upping the amount for the fund. He said filter socks cost about \$2 a piece, and the disposal cost is \$180 to \$600 a piece. He said because there are no fluids allowed in the drill pits, there needs to be socks to strain the fluids. He said there needs to be a North Dakota solution to the disposal of filter socks. He said you could stand in the pile of filter socks in Noonan for one year and it would equal going to the dentist once and having an x-ray. He said the solution needs to allow a small business with a filter sock to dispose of it in an inexpensive manner. He said the program should be like the Project Safe Send program for agricultural chemicals. He said the crude oil characterization study for rail transport is being done, and he does not think that Bakken oil is different from other oil. He said that it is flammable, and that is why it has value.

In response to a question from Representative Nelson, Mr. Ness said there is no quick field test for the radioactivity in filter socks. He said North Dakota only allows 5 units, and Montana allows 30 units in a municipal waste landfill.

In response to a question from Senator Triplett, Mr. Ness said temperature affects the flammability of oil, but field practices also affect the flammability. He said the Pipeline and Hazardous Materials Safety Administration (PHMSA) will have to decide if the data is good. He said no matter what the nature of the oil, it will all be placed in the same railcar. He said rail spills are a railcar safety issue.

Senator Triplett said marking the cars correctly as to the contents is important to emergency responders.

In response to a question from Chairman Wardner, Mr. Ness said there may be a Glendive, Montana, company that takes filter socks and transports them out of state to approved dump sites.

Mr. Jay Almlie, Senior Research Manager, Energy Environmental Research Center, and Mr. Kevin Sedivec, Program Leader, Range Science, North Dakota State University, gave a presentation ([Appendix L](#)) on spill remediation, land reclamation, and waste minimization.

In response to a question from Senator Murphy, Mr. Almlie said a sock has to be sent to a specialized laboratory to be tested for radioactivity, and it takes 21 days.

In response to a question from Senator Hogue, Mr. Almlie said the landfill in Sawyer may be correctly designed to handle filter socks but does not have the regulatory structure.

In response to a question from Senator Andrist, Mr. Almlie said the goal of the program is to see what is needed for a representative sample and what poses a public health risk. He said naturally occurring radioactive material is not a nuclear waste.

In response to a question from Chairman Wardner, Mr. Sedivec said moving salt through tile and a water flood is very expensive. He said a five-acre site in Canada cost \$100,000. He said the objective of his study is to look at oil sites and do demonstration trials. He said there will be research done in greenhouses to look for perennial crops that will grow on salted soils.

In response to a question from Senator Triplett, Mr. Sedivec said the study will look at input costs and output returns.

In response to a question from Representative Nelson, Mr. Sedivec said the work on coal mine remediation is miles ahead of oilfield remediation. He said the coal data will be used as a guideline for soft remediation on oil sites.

### KLJ

Mr. Niles Hushka, Chief Executive Officer, KLJ, gave a presentation ([Appendix M](#)) on the study of the future of the oil and gas industry in this state. He said of the 25 assumptions, maybe two or three will change by the end of this study.

In response to a question from Representative Silbernagel, Mr. Hushka said there will be at least 40,000 wells in this state.

In response to a question from Chairman Wardner, Mr. Hushka said Canada has heavy crude, which is different from the light sweet crude of the Bakken. He said refineries either refine heavy crude or light crude but not both. He said the Keystone Pipeline will transport heavy crude to the Gulf of Mexico. He said the Gulf refineries shifted to heavy crude five years to seven years ago. He said the Keystone will not compete with Bakken crude. He said the Eagle Ford and the Permian are close to the refineries on the Gulf Coast. He said these are old fields with infrastructure and operate year round.

In response to a question from Chairman Wardner, Mr. Hushka said the export of finished product must be done on a United States flagship, and there are not many of these ships. He said crude may not be exported. He said the export of crude will be allowed in the future but not during the study. He said the East and West Coasts have enough markets for Bakken crude.

In response to a question from Senator Triplett, Mr. Hushka said if the results will change if the assumptions change, it will be noted in the final report.

In response to a question from Senator Triplett, Mr. Hushka said the development of global markets will be lightly covered in the final report. He said in verifying the baseline, KLJ found that there has been a change to the use of more rail and less pipelines. He said previously the use of each was equal.

In response to a question from Senator Triplett, Mr. Hushka said the environmental portion of the study will be examined from a public safety perspective.

In response to a question from Senator Andrist, Mr. Hushka said assuming all shale plays are at full production and this state at 1.9 million barrels per day with the cost of oil at \$130 per barrel, this country will import 2.7 million to 3.5 million barrels of oil a day. He said there is a demand for Bakken crude. He said the United States will be energy independent in the next five years but not crude independent.

In response to a question from Senator Murphy, Mr. Hushka said the Class I railroads are making significant improvements by installing double track. He said this allows agricultural traffic to bypass stored cars. He said over time, the railroads will be able to move more agricultural product.

**It was moved by Senator Armstrong, seconded by Senator Triplett, and carried on a roll call vote that the committee accept the completion of Phase I and Phase II of the study for payment.** Senators Wardner, Andrist, Armstrong, Murphy, and Triplett and Representatives Damschen, Porter, Schatz, and Silbernagel voted "aye." No negative votes were cast.

## COMMITTEE DISCUSSION

Representative Porter requested an overview of fines and penalties that may be imposed by the Department of Mineral Resources for spills and illegal dumping. He requested an overview of remediation of well sites by a representative of the Oil and Gas Division.

Senator Andrist said best regulatory efforts make mistakes expensive. He said he heard that \$12,500 is the most expensive penalty that can be imposed by the Oil and Gas Division. He said the penalties need to be more severe.

Representative Porter requested a bill draft to fund four lanes of United States Highway 85 in the same manner that water projects are funded over time. He said out of the 1 percent of the 5 percent production tax, \$75 million dollars per biennium should be made available for all aspects to four-lane United States Highway 85 to the South Dakota border.

Representative Porter requested an increase in the remediation fund from \$5 million to \$10 million per biennium and \$75 million to \$150 million total cap.

Senator Triplett endorsed the previous requests and requested a presentation on costs for cleaning up legacy wells and brine spills from a representative of the Oil and Gas Division. She requested an update on the Tesoro spill and costs for remediation from the State Department of Health.

Senator Murphy said he supports an incentive to move natural gas to customers on a larger scale. He said the gas should be processed and moved to local markets instead of being flared.

Representative Porter requested an update from the Department of Commerce of the potential beneficial uses for natural gas and current incentives for those beneficial uses.

Chairman Wardner said the committee will receive reports from the EmPower North Dakota Commission, KLJ, the Energy and Environmental Research Center, North Dakota State University, and the right of way task force. He said the committee will have lots of information to make its decisions.

No further business appearing, Chairman Wardner adjourned the meeting at 4:25 p.m.

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Timothy J. Dawson  
Committee Counsel

ATTACH:13