

Energy Institute releases interim report on domestic well water

Fredericton – The New Brunswick Energy Institute in conjunction with the University of New Brunswick have released an interim report on the baseline groundwater quality study that is being carried out in parts of Kent County and Sussex, two areas of potential shale gas development.

“The objective of this study, which was initiated by the New Brunswick Energy Institute, is to establish a baseline on groundwater quality in selected regions in southern NB where there has been interest and/or exploration activities related to unconventional shale gas production,” according to Dr. Dave Besner, Chair of the Energy Institute. “

The interim report covers the first year of the two year study and the data reflects the period between April 2014 and April 2015.

“A total of 254 private wells were sampled for a range of groundwater quality parameters,” according to Diana Loomer, the Project Manager from the Department of Civil Engineering of UNB. In 2014, 152 wells in the Sussex area and 102 in Kent County were sampled. Methane is one of the parameters, and it can occur naturally in groundwater but it may also occur as a result of contamination from oil & gas activities. It is very difficult to distinguish contamination from naturally occurring methane without the use of baseline studies.

“Preliminary results from the dissolved gas testing show that low levels of methane are frequently detected within both study areas,” according to Loomer. “In the Kent area 69% of wells sampled contained detectable dissolved methane, while in the Sussex study area, 50% of wells sampled contained detectable methane. Almost 90% of wells with detectable methane had concentrations less than 1.0 mg/L.”

“Baseline data sets are important because they may assist with identifying water quality consequences, if any, of future shale gas development and determining if hydrogeological conditions or well construction are important factors in controlling the occurrence of gases, such as methane, in well water,” noted Dr. Kerry MacQuarrie, a UNB Civil Engineering Professor and the principal investigator for this study.

Another phase of the research, the time-series monitoring of a sub-set of the study wells in both areas, started in January 2015 and will continue throughout the year. Well water sampling in two additional study areas in the province, the St. Antoine-Shediac region and the Boisetown-Upper Blackville region, is expected to commence in June 2015.

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