



**Environment**  
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File Number: 92100-30-064245-R01, Volume 2  
92100-30-064246-R01, Volume 2

Dr Peter Hill,  
President and CEO  
Triangle Petroleum / Elmworth Energy  
1660 Wynkoop Street  
Suite 900  
Denver, Colorado  
USA  
80202

COPY

RE: **Industrial Approvals to Operate:**  
**#2008-064245 R-01 and #2008-064246 R-01**  
**Kennetcook KC-1 and KC-2 Sites, Kennetcook, Nova Scotia**  
**Elmworth Energy**

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Dear Dr Hill,

The above Approvals for activities associated with Oil and Gas, under the Activities Designation Regulations, pursuant to the Nova Scotia Environment Act, expire on February 28, 2012. Present at each of these facilities are inactive well heads and storage of brine within bermed ponds.

The initial application in 2008 for approval to operate the Brine Storage Ponds, indicated the bermed ponds were designed and installed to hold fresh water for development of the wells on site. However during the development of these wells in 2007, a significant quantity of production water was encountered and this was accommodated within the bermed ponds. The application for operation of brine storage ponds was submitted after the ponds had been filled with the produced water.

As approval was given after the produced water was stored within ponds that were intended for the storage of fresh water, Nova Scotia Environment (NSE) considers the initial design of the ponds did not take into account the storage of the high saline content production water. Short term approvals of two years duration were issued on the understanding that storage of brine was temporary until final disposal of the brine could take place. The Approval was renewed in 2011 allowing the storage to occur for a further one year, with the requirement for a plan to be submitted by the end of June 2011, covering final disposal and reclamation of the facility. This plan has not been received.

Elmworth has submitted applications to dispose of the stored brine held in the ponds by deep

well injection into the wells present on each site. You have already been advised by a letter dated May 14, 2011 that a decision regarding the use of deep well injection as a disposal method for produced water is on hold pending completion of a review of hydraulic fracturing (and associated activities). Therefore deep well injection can not be considered as an option for the disposal of the current brine stored at the KC-1 and KC-2 sites.


In a site visit on May 5, 2011, a seepage was found to be occurring at the KC-1 site, at the side of the berm. A Directive was issued in May 2011 by NSE to require a plan to prevent any release to the environment. Through the response to the Directive received by NSE, and as a result of further investigation by your consultant, your conclusion is that the seepage is most likely to be arising from the brine pond.

Given that one of the two brine ponds is leaking, that the original intention of the ponds was for the storage of fresh water, and that NSE has not received a plan for final disposal and reclamation of the facility as required by your Approvals, this letter is to advise you that NSE will not grant a further renewal of the existing Approvals beyond the expiry date of February 28, 2012. The contents of the brine ponds present at each facility must be removed by November 1, 2011 and site reclamation completed by February 28, 2012.

Two Directives have been issued and accompany this letter requiring the treatment and/or offsite disposal, and reclamation plan, for each facility, to be submitted as per condition 11(a) of each Approval, by the deadline specified in the Directives. These plans should take into account the need for the removal of the ponds and reclamation of each facility. Information should be included regarding the intentions for the well heads.

Please contact me at (902) 424-7773 if you have any questions.

Regards  
**NOVA SCOTIA ENVIRONMENT**

  
Stephen Westhaver  
District Manager

cc: Karen March, Dillon Consulting Ltd  
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