

**Derek J DeGrass - RE: Directive pursuant to Environment Act - 2008-064245/6-R01 - Kennetcook #1/2 Well Sites and Brine Ponds**

**From:** Elaine M Marshall  
**To:** Hill, Peter  
**Date:** 8/31/2011 8:50 AM  
**Subject:** RE: Directive pursuant to Environment Act - 2008-064245/6-R01 - Kennetcook #1/2 Well Sites and Brine Ponds  
**CC:** DeGrass, Derek J; Westhaver, Stephen B  
**Attachments:** 110831 elmworth triangle KC-2 Dir update .pdf; 110831 Elmworth Triangle KC1 Dir Update .pdf

Peter

Attached is the updated Inspection in response to your submission. I have included the email address for Derek DeGrass who will now take this forward.

Regards  
 Elaine

Elaine Marshall MSc MCIWM CEnv  
 Nova Scotia Environment  
 Inspector Specialist  
 Bedford  
 Tel: 1-902-424-2961

>>> Peter Hill <peter@trianglepetroleum.com> 29/08/2011 13:24 >>>

Elaine,

I acknowledge receipt of your email from August 23, 2011 and the attached Directive and Inspection Reports. I have over the past few days considered your requests and spoken to our Consultants, Dillon, Atlantic Industrial Services (AIS), the Nova Scotia Department of Energy, as well as Stephen Westhaver. The aim of these discussions was to further research and discuss the options that we laid out in our letter and attachments dated August 18, 2011.

I would like to clarify a few items that were contained in our submitted plan. I would also like to stress that it is not feasible to drain the ponds by November 1, 2011 unless we can conduct a full and successful re-injectivity test, and even that timeline is tight given the availability of work-over rigs and service providers. Given the fact that you have previously rejected our preferred option of re-injectivity, we are left with either the advanced water treatment technology approach, which is still in its infancy and requires a scale-up test at site, or the gradual use of the brines as a de-icing/wetting agent on Nova Scotia roads.

The haulage of the brine ponds to the only available site in Nova Scotia is managed by AIS. Under the current haulage restrictions and treatment procedures, it would take between 60-72 weeks to drain the 12-14 million liters using 1.5 truck haulage movements per day. We have been advised by AIS that this process could be accelerated to between 5-6 truck haulage movements per day, which would accelerate drainage of the ponds to between 5-6 months. This big increase in truck movement would require new government approvals for AIS to carry heavier truck density and greater discharge volumes to the sea, which I cannot in all conscience seek to recommend for your approval the drainage of the ponds by having between 5-6 trucks PER DAY for the next 5-6 months in the Kennetcook area and the AIS site in Dartmouth. The damage to the environment, townships, roads, sites, traffic density and most importantly road safety, would be too dangerous.

I have made all these points to Mr. Westhaver and we are considering them as we both seek a solution to the situation. As we have previously stated, it is not possible to get the brine ponds drained by November 1, 2011,

so I request your advice as to what is the next best alternative. All parties involved have a responsibility to try and find a reasonable solution to this situation and I would like to make the following recommendation that is in line with your request for our preferred option:

i) We continue to monitor the well sites of Kennetcook 1-2 and keep both ponds at two meters below the free board of the pond-containing berms. We complete the additional earth/erosional works submitted to you in our letter dated June 13, 2011 to ensure, as far as possible, that there are no further leaks or overspill at Kennetcook#1.

ii) We wait for the decisions and recommendations of the Review Committee on Hydraulic Fracturing that are expected later this year.

iii) Should the Review fail to support deep re-injectivity of formation waters back to their formation of origin, or ban, restrict or delay shale gas activity for a long period, then we will drain the ponds by the then best method available, remediate all sites, return our licenses back to the Nova Scotia Department of Energy and cease any further investment in the Province of Nova Scotia.

I am looking for a clear, unambiguous way forward that attempts to accommodate all requirements and look forward to a discussion at your convenience in the coming week or so.

With best wishes,

Peter

Dr Peter J. Hill CEO Triangle Petroleum Corporation

**From:** Elaine M Marshall [mailto:[MARSHAEM@gov.ns.ca](mailto:MARSHAEM@gov.ns.ca)]

**Sent:** Tuesday, August 23, 2011 12:27 PM

**To:** Peter Hill

**Cc:** Christine M Penney; Stephen B Westhaver

**Subject:** Re: Directive pursuant to Environment Act - 2008-064245/6-R01 - Kennetcook #1/2 Well Sites and Brine Ponds

Peter

Thank you for the submission. Please find attached the Reports for KC-1 and KC-2.

I have extended the comply by date of the Directives until Monday next, August 29, 2011 to allow you to come back to NSE with your preferred option to ensure the ponds are empty of brine by November 1, 2011.

Regards

Elaine

Elaine Marshall MSc MCIWM CEnv

Nova Scotia Environment

Inspector Specialist

Bedford

Tel: 1-902-424-2961

>>> Peter Hill <[peter@trianglepetroleum.com](mailto:peter@trianglepetroleum.com)> 18/08/2011 20:21 >>>

Elaine,

Please find attached our Plan to meet the requirements of your Directive of August 2<sup>nd</sup> 2011, together with a number of background attachments. We look forward to discussion and finding a common way forward.

Best wishes

Peter

Dr Peter J. Hill CEO Triangle Petroleum Corporation