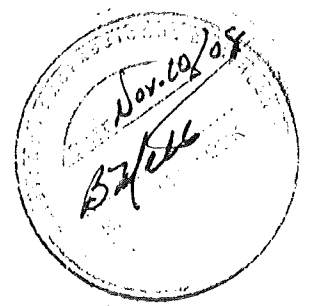


Report



File No: 92100-30-064245

Application No: 2008-064245

Project: Elmworth Energy Corporation
Brine Storage Pond (KC-1)- Natural Gas Exploration
Kennetcook , Hants County

Introduction: To evaluate the potential environmental effects associated with the operation and reclamation by Elmworth Energy Corporation of a Brine Storage Pond at Kennetcook, Hants County. The proposed Brine Storage Pond is located roughly 2.5 km north of Kennetcook accessed off Route 236. This is on map series 11E/04, grid reference E 443,756 N 5,004,915 and PID # 45361060.

Discussion: This Facility will be operated on lands leased by the Approval Holder. A copy of leases have been submitted and are included in the file. The brine ponds are located on a 120 m x 120 m cleared area on the lease property. Currently there is no activity on the site other than routine monitoring of brine pond water levels and periodic removal of brine for disposal. The brine results from a mixture of fresh river water, rainwater and waste waters from previous well fracing activity in 2007. The well head has been installed and further exploration and development activity on site is suspended pending the results of further exploration.

Environmental Impact: The main environmental impacts associated with the proposed operation are the potential inadvertent discharge of high salinity wastewater into receiving watercourses, wetlands or groundwater. Noise, dust, surface runoff, and rehabilitation are other relevant issues.

The brine pond is a 10,000 m³ containment with an engineered design and construction. It has an impermeable 40 mil HDPE liner and a de-watering sump for removal of wastewater.

1722

**Air Emissions
(Dust) & Noise:**

Environmental impact from noise and dust are expected to be minimal. Noise and dust will be further restricted to the limits set forth in the approval and shall be monitored at the Department's request.

Surface Runoff:

Environmental impact from surface runoff will be controlled via standard erosion/sedimentation controls so that surface runoff is retained prior to leaving the site. The closest watercourse is a tributary to Burns Brook located approximately 300 metres to the south from the site through a wooded area. There is currently no evidence of negative offsite impacts.


Surface water runoff from the operation will be restricted to the limits in Nova Scotia Environment approval. Surface runoff will be monitored by the Approval Holder at the departments request. Groundwater monitoring or mitigation may be required in the event spill or release of brine. The site is about 2 kilometres to the nearest domestic well. The company has prepared a contingency plan to address mishaps associated with the brine ponds.

Rehabilitation:

The Approval Holder plans to immediately restore all disturbed areas via grading and vegetation once works are completed or prior to expiry of the approval.

Recommendation:

It is therefore recommended that Elmworth Energy Corporation application for the operation and reclamation of a Brine Storage Pond for natural gas exploration at Kennetcook, East Hants County, be approved subject to the appended terms and conditions.



Bernard J. Matlock, P.Eng.
Regional Engineer