

APPROVAL

**Province of Nova Scotia
Environment Act, S.N.S. 1994-95, c.1 s.1**

APPROVAL HOLDER: ALTON NATURAL GAS STORAGE L.P.

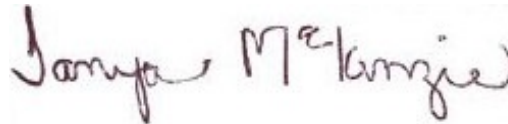
SITE PID: 20076386

APPROVAL NO: 2008-061384-03

EXPIRY DATE: January 20, 2026

Pursuant to Part V of the *Environment Act*, S.N.S. 1994-95, c.1 s.1 as amended from time to time, approval is granted to the Approval Holder subject to the Terms and Conditions attached to and forming part of this Approval, for the following activity:

Industrial - Oil and Gas - Brine Storage Pond



Administrator: Tanya MacKenzie

Effective Date: April 8, 2019

The Minister's powers and responsibilities under the Act with respect to this Approval have been delegated to the Administrator named above. Therefore, any information or notifications required to be provided to the Minister under this Approval can be provided to the Administrator unless otherwise advised in writing.

TERMS AND CONDITIONS OF APPROVAL

Nova Scotia Environment

Approval Holder: ALTON NATURAL GAS STORAGE L.P.

Project: Alton Natural Gas Storage

Site:

PID	Civic #	Street Name	Street Type	Community	County
20076386	625	RIVERSIDE	RD.	FORT ELLIS	COLCHESTER COUNTY

Approval No: 2008-061384-03

File No: 92100-30-TRU-2008-061384

Grid Reference: Easting - 469,700, Northing - 5,001,050

Reference Documents

- Application submitted April 3, 2019 and attachments.
- September 26, 2014 application and attachments.
- Environmental Management Plan - Operation of Brine Storage Pond and Associated Facilities, Alton Natural Gas Storage LP., dated October 6, 2014, as prepared by WSP Canada Inc.
- Alton Natural Gas Storage Estuarial Environmental Monitoring & Toxicity Testing, dated December 9, 2015.
- Letter dated August 1, 2014 from Mark McLean of Fisheries and Oceans Canada to David Birkett of Alton Natural Gas Storage LP. regarding their review of the Estuary Monitoring Plan.
- Alton Natural Gas Storage River Site Monitoring Plan During Cavern Development, dated December 10, 2015.
- Exposure Pathway Assessment Framework for Aquatic and Non-aquatic Species in Relation to the Alton Gas Natural Gas Storage Cavern Development at the River Site, dated December 9, 2015.
- Environmental Assessment Approval - Alton Natural Gas Storage Project, as dated

December 18, 2007.

- Email correspondence from Bob Rutherford to Brad Skinner regarding standard water analysis and total metals sampling parameters and attachments dated December 8, 2015.

- Email correspondence from Tim Church to Michael Cox and Jennifer Copage regarding a contingency plan for a brine pond breach and attachment dated December 11, 2015.

1. Definitions

- a. Act means Environment Act, Chapter 1 of the Acts of 1994-95, and includes, unless the context otherwise requires, all regulations made pursuant to the Act.
- b. Administrator means a person appointed by the Minister for the purpose of this Act, and includes an acting administrator.
- c. Approval means an Approval issued pursuant to this Act with respect to an activity.
- d. Associated Works means all piping, valves, instrumentation, controls and mixing channel required for the operation of the Facility.
- e. Department means the Department of Environment, and the contact for the Department for this approval is:
Nova Scotia Environment
Central Region, Truro Office
36 Inglis Place
Truro, Nova Scotia B2N 4B4

Phone: (902) 893-5880
Fax: (902) 893-0282
- f. Facility means the Brine Storage Pond and associated works.
- g. Minister means the Minister of Environment and includes any person appointed as a designate of the Minister.

2. Scope

- a. This Approval (the Approval) relates to the Approval Holder and their application and supporting documentation, as listed in the reference documents above, to Operate the Facility, situated at or near Fort Ellis, Colchester County (the Site).
- b. The Facility shall be operated as outlined in the original application for industrial approval dated September 26, 2014 and supporting documentation under Reference Documents cited above.
- c. The Site shall not exceed the area as outlined in the application and supporting documentation.

3. General

- a. The Approval Holder shall operate the Facility in accordance with provisions of the:
 - i. Environment Act S.N.S. 1994-1995, c.1, as amended from time to time;
 - ii. Regulations, as amended from time to time, pursuant to the above Act.
- b. No authority is granted by this Approval to enable the Approval Holder to construct or operate the Facility on lands which are not in the control or ownership of the Approval Holder. It is the responsibility of the Approval Holder to ensure that such a contravention does not occur.
- c. If there is a discrepancy between the reference documents and the terms and conditions of this Approval, the terms and conditions of this Approval shall apply.
- d. The Minister or Administrator may modify, amend or add conditions to this Approval at anytime pursuant to Section 58 of the Act.
- e. This Approval is not transferable without the consent of the Minister or Administrator.
- f. If the Minister or Administrator determines that there has been non-compliance with any or all of the terms and conditions contained in this Approval, the Minister or Administrator may cancel or suspend the Approval pursuant to subsections 58(A)(1) and 58(A)(2) of the Act, until such time as the Minister or Administrator is satisfied that all terms and conditions have been met.
 - i. Despite a cancellation or suspension of this Approval, the Approval Holder remains subject to the penalty provisions of the Act and regulations.
- g. The Approval Holder shall notify the Department prior to any proposed extensions or modifications of the Facility, including the active area, process changes or waste disposal practices which are not granted under this Approval. An amendment to this Approval will be required before implementing any change. Extensions or modifications to the Facility may be subject to the Environmental Assessment Regulations.

- h. Pursuant to Section 60 of the Act, the Approval Holder shall submit to the Administrator any new and relevant information respecting any adverse effect that actually results, or may potentially result, from any activity to which the Approval relates and that comes to the attention of the Approval Holder after the issuance of the Approval.
- i. The Approval Holder shall immediately notify the Department of any incidents of non-compliance with this Approval.
- j. The Approval Holder shall bear all expenses incurred in carrying out the environmental monitoring required under the terms and conditions of this Approval.
- k. Unless specified otherwise in this Approval, all samples required to be collected by this Approval shall be collected, preserved and analysed, by qualified personnel, in accordance with recognized industry standards and procedures.
- l. Unless written approval is received otherwise from the Administrator, all samples required by this Approval shall be analysed by a laboratory that meets the requirements of the Department's "Policy on Acceptable Certification of Laboratories" as amended from time to time.
- m. The Approval Holder shall submit any monitoring results or reports required by this Approval to the Department. Unless specified otherwise in this Approval, all monitoring results shall be submitted within 30 days following the month of monitoring.
- n. The Approval Holder shall ensure that this Approval, or a copy, is kept on Site at all times and that personnel directly involved in the Facility operation are made fully aware of the terms and conditions which pertain to this Approval.
- o. Signage including emergency telephone numbers and contacts are to be posted at the entrance to the Facility.

4. Facility Operation

- a. The Approval Holder shall comply with all Terms and Conditions of the Environmental Assessment Approval issued on December 18, 2007, in accordance with the Environmental Assessment Regulations, pursuant to Part IV of the Environment Act for the Brine Storage Facility and associated works.
- b. The site shall be developed and maintained to prevent siltation of the surface water which is discharged from the property boundaries into the nearest

watercourse or beyond the property boundary. Erosion and sedimentation controls are to be in place as required to ensure Site runoff does not exceed the discharge limits contained herein.

- c. No authority is granted by this Approval to enable the Approval Holder to discharge surface water beyond the property boundary and onto adjoining lands without the authorization of the affected landowner(s). The Approval Holder shall ensure that the following discharge limits are met for any water which is discharged from the Site to a watercourse or wetland:

Clear Flows (Normal Background Conditions):

- i. Maximum increase of 25 mg/l from background suspended solids levels for any short term exposure (24 hours or less)
- ii. Maximum average increase of 5 mg/l from background suspended solids levels for longer term exposure (inputs lasting between 24 hours and 30 days)

High Flow (Spring Freshets and Storm Events)

- i. Maximum increase of 25 mg/l from background suspended solids levels at any time when background levels are between 25 mg/l and 250 mg/l
- ii. Shall not increase more than 10% over background suspended solids levels when background is > 250 mg/l

pH

- i. Range from minimum of 5 to a maximum of 9 in a grab sample
- ii. Range from a minimum of 6 to maximum of 9 as a Monthly Arithmetic Mean.

TPH

- i. = 15 mg/l
- d. The level of the brine in the brine storage pond and the flow of brine from the storage pond to the mixing channel shall be monitored continuously when brine is stored in, or released from, the storage pond.
- e. Water salinity and temperature monitoring shall be conducted using Conductivity, Depth, and Temperature (CDT's) arrays placed as specified in the document titled, "Alton Natural Gas Storage River Site Monitoring Plan During Cavern Development" (Monitoring Plan) dated December 10, 2015 as amended.
- f. Data from the CDT's shall be recorded and down loaded in accordance with the

Monitoring Plan.

- g. Salinity levels at the outlets of the mixing channel shall be maintained as specified in the Monitoring Plan. The Approval Holder shall immediately reduce the volume of brine water being discharged to the mixing channel as described in the Monitoring Plan if the salinity levels measured at the outlets of the mixing channel exceed the levels specified in the monitoring plan.
- h. The Approval Holder shall follow the requirements in the Monitoring Plan with regard to ceasing brining activities during the period of time that Striped Bass are spawning in the Shubenacadie River.
- i. The requirements specified in the Monitoring Plan may be reviewed and modified as information becomes available and monitoring trends identified. Any requests for changes to the monitoring plan must be made to the Administrator and, if deemed acceptable by the Department following appropriate consultation, shall be approved in writing by the Administrator.
- j. The Approval Holder shall maintain an issue/complaint monitoring program as outlined in the Environmental Management Plan submitted with the application for approval.
- k. The Approval Holder shall maintain Emergency Response and Contingency Plans as outlined in the Environmental Management Plan submitted with the application for approval.

5. Particulate Emissions (Dust)

- a. Particulate emissions shall not exceed the following limits at or beyond the Site property boundaries:
Annual Geometric Mean 70 µg/m³
Daily Average (24 hr.) 120 µg/m³
- b. Monitoring of particulate emissions shall be conducted at the request of the Department. The location of the monitoring station(s) for particulate will be established by a qualified person retained by the Approval Holder and submitted to the Department for approval, this may include point(s) beyond the property boundary of the Site.
- c. When requested, suspended particulate matter and PM₁₀ shall be measured by the EPA standard; EPA/625/R-96/010a, or equivalent acceptable to the Department.
- d. The use of used oil as a dust suppressant is strictly prohibited. The generation of dust from the Site shall be suppressed as required.

6. Sound Levels

- a. Sound levels measured at the Site property boundaries shall not exceed the following equivalent sound levels (Leq):
65 dBA 0700-1900 hours (Days)
60 dBA 1900-2300 hours (Evenings)
55 dBA 2300-0700 hours (Nights)
- b. Monitoring of sound levels shall be conducted at the request of the Department. The location of the monitoring station(s) for sound will be established by a qualified person retained by the Approval Holder and submitted to the Department for approval, this may include point(s) beyond the property boundary of the Site.

7. Groundwater

- a. The Approval Holder shall replace at their expense any water supply which has been lost or damaged as a result of extracting aggregate.
- b. A groundwater monitoring well shall be maintained immediately down-gradient of the brine storage pond. Baseline groundwater conditions shall be established before Facility operation commences and results submitted to NSE before the Facility operation commences. Groundwater shall be monitored quarterly for pH, conductivity, chloride concentration, and salinity.

8. Spills or Releases

- a. All spills or releases shall be reported in accordance with the Act (Part VI) and the Environmental Emergency Regulations and the Contaminated Sites Regulations.
- b. Spills or releases shall be cleaned up immediately in accordance with the Act and regulations.
- c. A spill response and reporting plan shall be maintained by the Approval Holder as outlined in the Environmental Management Plan submitted with the application for approval. Reports from this program are to be included in the quarterly reports required in Section 10 of this approval.

9. Rehabilitation

- a. The Approval Holder shall provide a rehabilitation plan acceptable to the Department at least 60 days before abandoning the site.

10. Site Specific Conditions

- a. The Facility shall be constructed, maintained and operated as indicated in the

plans prepared by WSP Canada Inc., dated November 22, 2013 and as stamped by R.W. Stephenson, P. Eng. on January 18, 2014.

- b. The Approval Holder shall sample the cavern brine water for Naturally Occurring Radioactive Materials, general chemistry, dissolved metals, hydrocarbons as specified in the Monitoring Plan and submit the results to the Department within 30 days of receiving the results unless an alternate time line is approved in writing by the Department.
- c. When solution mining is occurring, the Approval Holder shall prepare and submit to the Department monthly reports within the first four months and then quarterly reports thereafter unless otherwise directed by the Department, within 30 days following the reporting period, which includes:
 - i. Maximum and minimum brine levels in the Brine Storage Pond;
 - ii. Maximum levels recorded for each CDT monitor in the mixing channel, and all recorded levels which indicate an exceedance of the salinity limits established in the Monitoring Plan, with explanations and follow up actions for any exceedance;
 - iii. Any complaints received during the quarter and follow up actions taken;
 - iv. Any reportable spills and the actions taken to address the release; and
 - v. Groundwater monitoring results.
- d. Despite the issuance of this Approval, the Approval Holder remains responsible for complying with or obtaining any other requirement or authorization that may be required to carry out the activity, including those which may be necessary under provincial, federal or municipal law.

11. Mi'kmaq Engagement

- a. The Approval Holder shall develop in co-operation with the Mi'kmaq of Nova Scotia, a plan for Mi'kmaq involvement in the ongoing science, monitoring and review of the project. This plan shall be developed to the satisfaction of the Department and submitted for review by no later than April 30, 2016.
- b. The Approval Holder shall develop a communication plan for the purposes of sharing information between the Approval Holder and Sipekne'katik on environmental issues that may require an amendment to this Approval. Alton Gas shall contact Sipekne'katik to request their participation in the development of the communication plan, including mechanisms for Sipekne'katik to identify any questions or concerns about the communication plan or information that may be supplied to them in the future on environmental issues.

12. Public Consultation

- a. The Approval Holder shall form a Community Liaison Committee (CLC) for the operation of the brine storage pond, in consultation with NSE and with municipal and community representatives. The NSE Guidelines for the formation of a Community Liaison Committee shall be used for the guidance of the Approval Holder and community. The CLC shall be formed within 90 days of the Facility operations commencement and the makeup of the CLC submitted to NSE at the time.