



October 27, 2009

3425-6200-59240-16

Spectra Energy Midstream Corporation
c/o Harvey Heinrichs, P.Eng.
Canadian Chemical Technology Inc.
3740A - 11A St NE
Calgary, AB T2E 6M6

Dear Mr. Heinrichs:

**RE: ACID GAS DISPOSAL APPROVAL, AMENDMENT #1
SEMC DOE 15-24-80-15 W6M; WA# 23946; BELLOY FORMATION**

Commission staff have reviewed the application, dated September 22, 2009, requesting an amendment to Approval 09-16-001 for acid gas disposal into the Belloy formation of the subject well.

Progress Report #1, for the period of March to August 2009 has been received by the Commission. This thorough document indicates that performance was been within expected parameters, with no increase in reservoir pressure as measured June 23, 2009.

The average disposal rate over the reported period has been $25 \text{ e}^3\text{m}^3/\text{d}$, below the maximum approval rate, due mainly to Montney source gas being processed having lower than expected levels of CO_2 and H_2S . The amendment application requests an increase in the maximum disposal rate from $62 \text{ e}^3\text{m}^3/\text{d}$ to $95 \text{ e}^3\text{m}^3/\text{d}$. This increase will coincide with the Spectra West Doe Plant Phase 3 expansion, to meet design throughput specifications, however the actual disposal rate will likely not reach the requested level. The approved cumulative disposal volume is not being changed at this point.

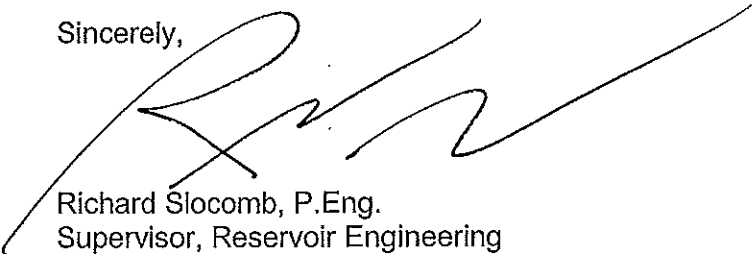
Attached please find Approval 09-16-001 (Amendment #1) for the application granted under Section 100 of the Petroleum and Natural Gas Act.

Condition # 9 of the original Approval specified the requirement for a reservoir Observation Well in the Belloy formation. Correspondence between the applicant and the OGC has verified that the well 11-35-80-15 W6M (WA# 10544) is a suitable location for this activity. Condition # 9 has been modified to recognize this well, with the minimum monitoring expectations, and grants an extension of the time for initial base-line testing.

Progress Reports continue to be required, to monitor performance.

Should you have any questions, please contact Ron Stefik at (250) 952-0310.

Sincerely,



Richard Slocomb, P.Eng.
Supervisor, Reservoir Engineering

cc: Felix Kwan, Suncor Energy Inc.

APPROVAL 09-16-001 (Amendment #1)

**THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION**

IN THE MATTER of a proposal (the Scheme) by Spectra Energy Midstream Corporation (the Operator) to inject acid gas into the Belloy formation in the well SEMC Doe 15-24-80-15 W6M; WA# 23946 (the well).

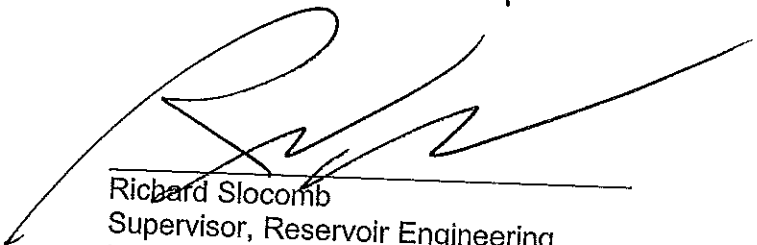
NOW THEREFORE, the Commission, pursuant to section 100 of the Petroleum and Natural Gas Act, R.S.B.C. 1996, c.361 hereby orders as follows:

The Scheme of the Operator for the injection of acid gas (hydrogen sulphide and carbon dioxide) into the Belloy formation through the well, as such proposal is described in an application from the Operator to the Commission dated July 9, 2008, and September 22, 2009 and related submissions, is hereby approved, subject to terms and conditions herein contained.

1. Acid gas shall be injected only into the Belloy formation (2178.0 – 2205.0 mKB) through the well.
2. The area of the Scheme shall consist of Section 24 of Township 80 Range 15 West of the 6th Meridian.
3. The wellhead injection pressure must be continually measured and recorded, and must not exceed 13,700 kPag.
4. The injection rate must not exceed $95 \times 10^3 \text{ m}^3/\text{d}$ expressed at 101.325 kPaa and 15 degrees Celsius.
5. The cumulative volume injected must not exceed $339.3 \times 10^6 \text{ m}^3$ expressed at 101.325 kPaa and 15 degrees Celsius.
6. The Operator must monitor the casing-tubing annulus pressure, conduct annual packer isolation tests and implement appropriate corrosion protection measures.
7. The Operator must maintain the hydraulic isolation of the injection zone.
8. Reservoir pressure tests of the Belloy formation in the well must be conducted by the Operator during scheduled plant shutdowns. Pressure fall-off tests require a shut-in period of not less than 5 days.
9. The Observation Well 11-35-80-15 W6M must commence collection of base-line data on the Belloy formation by December 15, 2009. The minimum monitoring program shall consist of;
 - a. An initial measurement of the reservoir pressure, with subsequent measurements annually.
 - b. An initial water analysis, with subsequent sampling and analysis annually, until such time as an increased H₂S level presents a safety risk.
 - c. An initial petrophysical formation saturation log, with subsequent logging to follow at the cessation of (b).

10. The Wellhead Emergency Shut-Off Device must be linked to H₂S detector heads at the wellhead and a Subsurface Safety Valve or Injection Check Valve must be installed in the tubing string to operate "fail-safe".
11. A barricade must be installed around the wellhead that is capable of withstanding vehicle collision.
12. All injection operations must be immediately suspended if any injection equipment, monitoring equipment or safety devices considered necessary for safe operation should fail.
13. A record of volume of acid gas disposed of through this well must be included on a Monthly Injection/Disposal Statement, in the prescribed form (BC-S18), which must be submitted to the Oil and Gas Commission (Victoria) not later than the 25th day of the month following the reported month
14. The Operator must submit a progress report to the Commission for each six-month period the Scheme is in operation, determined from the first day of injection noted in (15). The requirement may be amended at the request of the operator after the scheme has been in operation for a period of three years. The progress report is due within 60 days after the end of each period and must contain:
 - a) details of any workover or treatment program done on the well with reasons for the workover and results of the workovers,
 - b) a discussion of any changes in injection equipment and operations,
 - c) a general review of the operation of the project including identification of problems, remedial action taken and results of the remedial action on project performance,
 - d) a discussion of the overall performance of the scheme,
 - e) an evaluation of all monitoring done during the reporting period including corrosion protection, fluid analyses, logs and any other data collected,
 - f) a table showing monthly volumes of injected fluid, corresponding maximum wellhead injection pressures, maximum daily injection rates, average wellhead temperatures and hours on injection,
 - g) the volume-weighted average composition and formation volume factor for the injected fluid,
 - h) a plot showing monthly injection volume and average pressure versus time on an ongoing basis,
 - i) a table showing tonnes of sulphur and carbon dioxide disposed on a monthly and cumulative basis.
15. An Emergency Response Plan procedure must be filed with the Manager, Emergency Response and Safety prior to commencement of the injection operations.

16. The operations of the acid gas injection scheme will be subject to periodic review by the Commission. The Supervisor, Reservoir Engineering, Resource Conservation or the Director, Drilling and Production, may issue general guidelines regarding the operations of the acid gas injection scheme.
17. The approval or any condition of it may be modified or rescinded for non-compliance of the conditions or unsafe operations.



Richard Slocomb
Supervisor, Reservoir Engineering
Resource Conservation

DATED AT the City of Victoria, in the Province of British Columbia, this 27th day of October 2009.