



ATCO Gas and Pipelines Ltd. (South)

**Valve Assembly Relocation for In-Line Inspection
in the Redwater Area**

October 23, 2015

Alberta Utilities Commission

Decision 20682-D01-2015

ATCO Gas and Pipelines Ltd. (South)

Valve Assembly Relocation for In-Line Inspection in the Redwater Area

Proceeding 20682

Application 20682-A001

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1 Introduction

1. ATCO Gas and Pipelines Ltd. (South) (ATCO), by Application 20682-A001 registered on July 28, 2015, filed an application with the Alberta Utilities Commission under Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act* for the addition of a newly constructed pipeline [Line 27 – 0.17 kilometres of 168.3-millimetre (mm) outside-diameter pipeline] in Township 57, Range 22, west of the Fourth Meridian to facilitate in-line inspection (ILI) on ATCO's existing 168.3-mm and 273.1-mm Opal Field transmission pipelines (the proposed project or the proposed pipeline).

2 Background

2. In Proceeding 3577, ATCO Pipelines 2015-2016 General Rate Application, ATCO requested approval of its 2015 and 2016 revenue requirement, which included provision for capital expenditures to upgrade the 323.9-mm Opal Field transmission pipeline from the Opal 26-56 reducer to the Redwater Opal tie-in. ATCO filed a business case with the Commission outlining the need to modify the valve assembly on the 323.9-mm Opal Field transmission pipeline at the Opal 26-56 reducer to allow for ILI of a 5.8-kilometre segment of 323.9-mm pipeline between the Opal 26-56 reducer and the Redwater Opal tie-in. The business case included an assessment of three other alternatives considered by ATCO.¹

3. In its business case, ATCO stated that the ILI tools cannot be run in the 323.9-mm Opal Field transmission pipeline without modification to the pipeline and associated valve assemblies. ATCO described that ILI is required to identify potential locations of pipeline defects. ILI would also minimize the risk of pipeline failure from unidentified defects, ensure the continued reliable operation of the pipelines and enhance security of supply.

4. ATCO also indicated that coating damage due to soil stress, rock damage or incorrect backfilling practices, or from tenting at welds may exist. This damage can shield the cathodic protection current used for corrosion control from reaching the metal pipe surface and result in metal loss. In addition, ATCO explained that the risk of mechanical damage increases for pipelines in or near urban and industrial areas. Permanent modification of valve assemblies and other pipeline features to facilitate the passing of an ILI tool would allow the pipelines to be inspected with minimal to no disruption in pipeline operation, other than for the initial valve

¹ Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 reducer to Redwater Opal tie-in for ILI, pages 60 to 61 of 121.

modifications. ILI runs could then be repeated in the future. The total estimated capital cost for the project as proposed in the business case was \$650,000.²

5. Although ATCO indicated its preferred alternative was to modify the valve assembly on the 323.9-mm Opal Field transmission pipeline at the Opal 26-56 reducer to allow for ILI from the Opal 26-56 reducer to the Redwater Opal tie-in, as part of its business case, three other alternatives were discussed as follows:

Alternative 1: Conduct external coating direct assessment³

6. ATCO stated that external coating direct assessment (ECDA) is used to identify potential locations of coating damage on a pipeline. This could be utilized as a leading indicator for potential corrosion locations but would not identify existing locations of corrosion or mechanical damage. ECDA involves conducting a number of above-ground electronic surveys to collect data. This data would be analyzed to make inferences of the possible condition of the pipeline coating and metal. The surveys do not measure the metal loss on the pipe or indicate the severity of any metal loss. Numerous excavations may be required to validate the data, including inspections to confirm whether corrosion exists.⁴ ATCO stated that ECDA is better suited for inspection of short lengths of pipelines that cannot be evaluated through the use of an ILI tool. ATCO concluded that this alternative was not acceptable due to the relative inefficiency of ECDA as compared to ILI.⁵

Alternative 2: Conduct ILI through tethered or robotic tools⁶

7. ATCO stated that tethered and robotic tools can only be run on short sections of approximately four to five kilometres of pipeline, require a pipeline cut-out and outage for each run, and cannot be repeated without a complete duplication of work. The individual tethered or robotic runs that would be required were not acceptable for a critical pipeline, making this option unacceptable. Costs were estimated to be similar to the preferred alternative; however, existing vintage valve assemblies would not be removed and multiple short distance ILI runs would be necessary to inspect the pipelines, which would increase future ILI costs. This option was therefore rejected by ATCO.

Alternative 3: Conduct ILI with hot tap launch and receive assemblies⁷

8. ATCO stated that this option would not modify existing valve assemblies but would require an additional pig launch and require piping to be installed either by pipe cut-out or hot-tap fittings on both sides of each valve assembly. Costs were estimated to be similar to the preferred alternative; however, existing vintage valve assemblies would not be removed and

² Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 reducer to Redwater Opal tie-in for ILI, page 60 of 121.

³ Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 reducer to Redwater Opal tie-in for ILI, page 61 of 121.

⁴ Exhibit 3577-X0033, Response to IR. AP-CCA-2015FEB03-016 (a), page 25 of 264.

⁵ Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 reducer to Redwater Opal tie-in for ILI, page 61 of 121.

⁶ Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 reducer to Redwater Opal tie-in for ILI, page 61 of 121.

⁷ Exhibit 0002.00.ATCOPIPE-3577, Business Case to upgrade 323 mm Opal Field Transmission pipeline from Opal 26-56 Reducer to Redwater Opal tie-in for ILI, page 61 of 121.

multiple short distance ILI runs would be necessary to inspect the pipelines increasing future ILI costs. This option was therefore considered unacceptable to ATCO.

9. ATCO submitted that ILI is used to manage metal loss and other pipeline integrity concerns over the life of a pipeline. A repeating cycle of inspection and repair or maintenance is the best practice to assess the pipeline condition. ATCO considered that building valve assemblies that support repeating ILI with minimal impact on the pipeline operation is the best practice for transmission lines that cannot easily be taken out of service to conduct inspections. The use of temporary facilities could require system outages, additional manpower or construction for each subsequent inspection and create a greater complexity associated with the ongoing inspections. Conducting a cycle of building and dismantling temporary facilities in an ongoing inspection program would result in the requirement for additional long-term resources in order to manage the inspection program.⁸

Change in cost and scope from business case

10. ATCO stated that upon completion of detailed engineering, which was completed subsequent to submission of the general rate application business case, it was determined that the Opal 26-56 reducer was within a wetland region and was not a feasible location for the proposed valve assembly. Additional pipeline construction, as well as a permanent access road, would be required to install the proposed valve assembly at an accessible location for a pig launcher and receiver. In order to install a valve assembly at this location, additional costs would be required to obtain necessary environmental approvals as well as to relocate the valve assembly to a more accessible location.⁹

11. ATCO stated that after evaluating the proposed project with the additional pipeline construction, permanent road development, and costs associated with the environmental approvals, the cost was estimated to increase from \$650,000 to \$1,200,000. Due to the change in cost and scope from the business case, ATCO re-evaluated alternative options for the valve assembly.

12. ATCO determined that the preferred alternative was to install a pig launch and receiver at a new location that would be different from the original business case. Installing a pig launch and receiver further upstream at the Redwater Conservation receipt tie-in would allow for an additional 5.4 kilometres of 273.1-mm pipe to be internally inspected using a multi-diameter ILI tool. The original scope would have allowed for only 5.8 kilometres of 323.9-mm pipeline to be inspected. The existing Redwater Conservation receipt tie-in valve assembly is currently unpiggable and would require upgrading in the future to allow for further ILI of the system. The existing Redwater Conservation receipt tie-in valve assembly is located within a wetland; however, by installing the proposed 170 metres of 168.3-mm pipeline to relocate the above-ground facility, ATCO would be able to install the new valve assembly outside of the wetland area and reclaim the area previously occupied by the valve assembly.

13. ATCO stated that this subsequent revision to the proposed project was estimated to cost \$1,020,000, instead of \$1,200,000. This included a capital cost of \$970,000 and a removal cost of \$50,000. Despite the cost being similar to that of the updated alternative, ATCO determined

⁸ Exhibit 3577-X0064, Response to IR. AP-AUC-2015FEB03-039 (a), page 306 of 400.

⁹ Exhibit 20682-X0010, Cover Letter, page 2 of 3.

that this location was preferred as additional pipeline length can be inspected with a single tool run.

3 Commission process

14. The Commission issued information requests to ATCO on August 11, 2015, to clarify details of the application and ATCO filed its responses on August 14, 2015.

15. On September 23, 2015, the Commission issued a notice of application and indicated a deadline of October 14, 2015, for interested parties to file submissions with the Commission.

16. The Office of the Utilities Consumer Advocate (UCA), registered a statement of intent to participate on October 14, 2015, in response to the notice of application. The UCA expressed a potential concern with cost of the proposed project but had no objection to the installation of the proposed pipeline.¹⁰ The UCA stated that ATCO ought to have made the existing pipeline compatible with ILI when upgrades to the piping were made in 2008.

17. On October 18, 2015, the Commission issued a ruling where it found the UCA had not demonstrated that further process was required. The concern expressed by the UCA, namely the question of whether ATCO made an imprudent decision in 2008, was beyond the scope of this proceeding. The Commission indicated that it understood that the costs of the proposed project and how these costs would be included in rates had arisen in Proceeding 3577, the ATCO Pipelines 2015-2016 General Rate Application, since the UCA filed its letter dated October 14, 2015. As such, the Commission considered that the appropriate forum for the rate issue is Proceeding 3577.¹¹

4 Environmental assessment

18. ATCO stated that it engaged the services of EnviroMak Ltd. to prepare a biophysical environmental assessment¹² and an environmental protection plan¹³ for the proposed project. The biophysical environmental assessment and environmental protection plan for the proposed project included a description of the existing environmental and land-use conditions on the proposed project site and the anticipated environmental impacts, including mitigation plans for the proposed project. All recommendations included in the environmental protection plan would be implemented by ATCO.

19. ATCO stated that the biophysical environmental assessment identified that segments of the initially proposed pipeline installation, including the existing valve assembly, were within a wetland. However, the proposed location for the new valve assembly would not be located within a wetland, and as such, the relocation would allow for the restoration of the previously occupied wetland. Notification to Alberta Environment and Parks under the *Code of Practice for Pipelines and Telecommunication Lines Crossing a Water Body* for wetland crossing was completed on July 3, 2015. EnviroMak Ltd. determined that no fisheries values were present at the proposed project location. As such, the *Fisheries Act* does not apply and a Department of

¹⁰ Exhibit 20682-X0021, LT AUC re AP 20682 Application (Letter Filed by UCA).

¹¹ Exhibit No. 20682-X0022, AUC Letter to UCA.

¹² Exhibit 20682-X0004, Biophysical Environmental Assessment.

¹³ Exhibit 20682-X0003, Environmental Protection Plan.

Fisheries and Oceans application was not required. No application is required for Navigable Waters (Transport Canada) under the *Waters Act* as the proposed project was not within a scheduled water.

20. ATCO stated that a historic resources application was submitted to Alberta Culture and Tourism for approval and to confirm that no further assessment would be required for the proposed project. *Historical Resources Act* approval¹⁴ was granted on July 21, 2015.

21. ATCO stated that the pipeline would be tested for liquids prior to removal activities and any liquids found would be removed and properly disposed of. The topsoil would be stripped and stored and all surface disturbances would be backfilled before the topsoil is returned.

5 Consultation

22. ATCO advised that consultation with landowners and occupants for the proposed project has been completed in accordance with Rule 020: *Rules Respecting Gas Utility Pipelines*. Confirmation of non-objection by directly and adversely affected landowners was obtained by ATCO on July 24, 2015. A First Nations consultation adequacy assessment tool determined that consultation with First Nations was not required.

6 Commission findings

23. Approval for new gas utility pipelines in Alberta generally follows two separate application processes. One process sets rates to allow the gas utility to recover its prudently incurred costs. In this process, the gas utility seeks the Commission's approval for the forecast capital expenditures for new pipeline facilities within the context of a utility rate application pursuant to the *Gas Utilities Act*. In its general rate application (General Rate Application), the gas utility includes a business case for the new pipeline project that describes the need or justification for the new project, the alternatives available to meet that need and the utility's choice of the best alternative.

24. The Commission's assessment of the business case is 'economic' in nature and includes a cost benefit analysis, supply-demand forecasts, safety and security of supply analyses and rate impact analyses. However, there is generally little consideration of site-specific impacts, and consequently, potentially affected landowners have generally not been part of the General Rate Application process.

25. In the other process, the gas utility seeks the Commission's approval to construct and operate a pipeline pursuant to the *Pipeline Act*. This process is generally known as a "facility" application where the focus is on the site-specific impacts of the project. When deciding whether to approve a facility application, the Commission evaluates the justification for the project as configured and its site-specific impacts. The need for the project, including its economic benefits, is weighed or balanced against any adverse social, economic and environmental effects to determine the proposed project's acceptability.

¹⁴ Exhibit 20682-X0007, Historical Resources Application.

26. While gas utilities in Alberta generally follow these two application processes for the approval of new gas utility pipeline projects in the order presented above, there is no statutory requirement that they proceed in this fashion.
27. The Commission has enacted certain amendments to Rule 020 which came into effect on March 16, 2015. Pursuant to these provisions in Rule 020, the Commission will determine the need for the project in a facilities application if the application is expected to be completed prior to the decision being issued for the rates application. A gas utility can seek approval to construct and operate a new gas utility pipeline under the *Pipeline Act* without prior approval of the associated forecast capital expenditures. In that case, the Commission would consider the need for the project, the alternatives, and the specific routing, all within the facility proceeding, without approving the forecast rate increases necessary to recover the project's costs.
28. In its application ATCO requested approval of both the need for the project as well as approval of the facilities to construct the project. The business case for the proposed project was included in Proceeding 3577, the ATCO Pipelines General Rate Application. The Commission considers that reply argument in Proceeding 3577 will be filed on November 27, 2015. Accordingly, given the date of this decision, the Commission will assess the need for the proposed project in this application.
29. When deciding whether approval of the proposed facilities is in the public interest the Commission is required by Section 17 of the *Alberta Utilities Commission Act* to have regard to the proposed project's social and economic effects and its effects on the environment.
30. The Commission has reviewed the application and has determined that it meets the requirements, including the public involvement and consultation requirements of Rule 020. The Commission observes in this respect ATCO's confirmation that there are no outstanding public or industry objections or concerns. The Commission also considers that other than the UCA's submission dated October 14, 2015, no other party has expressed concerns about the application by filing a statement of intent to participate.
31. The Commission considers that, in the business case, ATCO initially proposed to modify the valve assembly on the 323.9-mm Opal Field transmission pipeline at the Opal 26-56 reducer to allow for ILI of a 5.8-kilometre segment between the Opal 26-56 reducer and the Redwater Opal tie-in. The Commission accepts ATCO's assessment that, after detailed engineering, it was determined that the Opal 26-56 reducer was within a wetland region which was not a feasible location for the proposed valve assembly.
32. The Commission accepts ATCO's assessment that coating damage due to soil stress, rocks or incorrect backfilling practices or from tenting at welds may exist and that ILI is an efficient and cost effective method to identify potential locations of any pipeline defects for the circumstances of this specific project. In order to ensure the continued safe and reliable operation of the pipelines, and enhance security of supply, the Commission approves the need for the proposed project.
33. The Commission considers ATCO's preferred alternative to install a pig launcher and receiver further upstream at the Redwater Conservation Receipt tie-in to be beneficial and efficient since it would allow for an additional 5.4 kilometres of 273.1-mm pipe to be internally inspected using a multi-diameter ILI tool. The Commission also considers that the existing Redwater Conservation receipt tie-in valve assembly is currently located within a wetland but

can be relocated outside of the wetland by installing the proposed 170 metres of 168.3-mm pipeline. The preferred alternative presented in the application is estimated to cost \$1,020,000 which is similar to the revised estimated cost of the original preferred alternative presented in the business case. After considering these factors, the Commission agrees with ATCO that the preferred alternative presented in the facilities application is superior to the other alternatives presented.

34. The Commission acknowledges that ATCO acquired an approval pursuant to the *Historical Resources Act*. The Commission also recognizes that wetland crossing notifications have been made to Alberta Environment and Parks. The Commission also accepts ATCO's submission that *Fisheries Act* and *Navigable Waters Act* clearances are not required for the proposed project.

35. The Commission finds that the environmental information required for the proposed project has been sufficiently provided within the application environmental protection plan, biophysical environmental assessment and information request responses. The Commission is satisfied with ATCO's commitments to follow the specifications presented in the environmental protection plan in order to reduce the risk of adverse environmental impacts of the proposed project.

36. Based on the foregoing, the Commission considers the proposed project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*. The amended licence is attached.

7 Decision

37. Pursuant to Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act*, the Commission approves the amendment to Licence 6419 and grants ATCO the amended licence as set out in Appendix 1 – Gas Utility Pipeline – Valve Assembly Relocation for In-Line Inspection – Licence 6419 – October 23, 2015 (Appendix 1 will be distributed separately).

Dated on October 23, 2015.

Alberta Utilities Commission

(original signed by)

Tudor Beattie, QC
Commission Member