ATCO Gas and Pipelines Ltd. (South)

West Calgary Connector Pipelines Project

February 21, 2017

Alberta Utilities Commission
Decision 21591-D01-2017
ATCO Gas and Pipelines Ltd. (South)
West Calgary Connector Pipelines Project
Proceeding 21591
Application 21591-A001

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Published by the:
Alberta Utilities Commission
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1 Decision summary

1. In this decision, the Alberta Utilities Commission must decide whether it is in the public interest to approve an application by ATCO Gas and Pipelines Ltd. (South) (ATCO) for new high-pressure pipelines in west Calgary, primarily within the Calgary transportation and utility corridor (TUC). The proposed pipelines, which ATCO refers to as the West Calgary Connector Pipeline Project (WCC project), would be a combined length of approximately 20 kilometres. The map, attached to this decision as Appendix B, shows the proposed pipelines' route.

2. Several landowners along 101 Street S.W. objected to ATCO's application on the grounds of risk, safety, aesthetics and the destruction of trees and wildlife habitat. Burnswest Corporation and Burnco Rock Products objected to the alignment of the proposed pipelines on the grounds that it could interfere with its gravel operations located on lands adjacent to the WCC project.

3. After consideration of the application and the concerns raised by interveners, the Commission finds that the proposed pipelines can be constructed and operated safely in the proposed location and that approval of ATCO's application is in the public interest having regard to its social, economic and environmental effects. The Commission's reasons for this decision are set out in detail below.

2 Background

2.1 ATCO's Urban Pipeline Replacement Project

4. Many of ATCO's high-pressure gas transmission pipelines currently located in Edmonton and Calgary were constructed prior to 1970 on the outskirts of each city. Because of urban development, many of these pipelines are now located in highly-developed, densely-populated areas.

5. In 2011, ATCO initiated a program for the replacement of these urban pipelines. ATCO identified 12 replacement projects, four in Edmonton and eight in Calgary, designed to rebuild existing pipelines in the Edmonton and Calgary TUCs. ATCO referred to the project collectively as the Urban Pipeline Replacement Project (UPR project). In its UPR project application, ATCO described why the project was necessary, the three other alternatives it considered, and why it believed that its proposed UPR project was the best alternative.

6. The Commission held a public hearing to consider the need for the UPR project and the alternatives developed by ATCO. The Commission approved ATCO's UPR project application in Decision 2014-010.[1] The Commission decided that the risk of continued long-term operation

[1] Decision 2014-010: ATCO Pipelines, a division of ATCO Gas and Pipelines Ltd. – Urban Pipeline Replacement

of the existing Edmonton and Calgary pipeline systems was unacceptable and determined that ATCO's proposal to rebuild the systems primarily within the TUCs was in the public interest. It concluded that the UPR project proposal was superior to the other alternatives, having regard to risk management, system integrity, reliability of supply, public disruption, technical feasibility and siting.

7. Following the Commission's approval of the need for the UPR project, ATCO began to file applications for the individual pipeline projects that were described in its UPR project application. The WCC project is the seventh UPR project to be considered by the Commission.

2.2 The West Calgary Connector Pipeline Project application

8. ATCO filed its application for the WCC project (Application 21591-A001) on May 5, 2016. The application was filed pursuant to Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act* and was assigned to Proceeding 21591. The WCC project consists of 18.82-kilometres of 508-millimetre pipelines to be constructed from 12 Mile Coulee Road N.W. to Glenmore Trail S.W. within the Calgary TUC; and 1.11 kilometres of other minor connecting pipelines. A detailed description of the project is found in Section 5 of this decision.

9. The Commission mailed a notice of application on June 6, 2016 to over 2,700 land title holders and occupants within 200 metres of the proposed pipelines. The notice was emailed to AUC eFiling System users that had chosen to be notified of notices of application issued by the Commission. The notice was also published on June 11, 2016 in both the Calgary Herald and the Calgary Sun, and was made available on the AUC website.

10. Corine Frick, Norman and Melba Lewis, Minwoo Nam and Burnswest Corporation and Burnco Rock Products (Burnswest/Burnco), responded to the notice of application. On August 26, 2016, the Commission wrote to these parties and advised that each had satisfied the test for standing set out in Section 9 of the *Alberta Utilities Commission Act*.[2]

11. The Commission issued a notice of hearing to the parties with standing on August 30, 2016. Notification was also automatically emailed to AUC eFiling System users that had chosen to be notified of notices of hearing issued by the Commission.

12. The Commission held the public hearing in its hearing room in Calgary, Alberta on November 23, 2016. Ms. Frick, Mr. Nam, Burnswest/Burnco and a representative on behalf of Mr. and Mrs. Lewis all participated in the hearing. Mariyan Trnski also participated in the hearing to express his concerns and the concerns of one of his neighbours, Trevor Miller. The Commission considers the close of record for Proceeding 21591 to be November 23, 2016.

3 The statutory scheme and pipeline design standards

3.1 Approval of new gas utility pipelines in Alberta

13. The Commission's authority to approve an application for the construction and operation of a new gas utility pipeline is found in the *Gas Utilities Act* and the *Pipeline Act* and its regulations.

Project, Proceeding 1995, Application 1608617, January 17, 2014. Errata issued on February 21, 2014.

[2] Exhibit 20591-X0064, AUC Ruling on Standing, August 29, 2016.

14. Section 4.1(1) of the *Gas Utilities Act* states:

> **4.1(1)** In addition to the jurisdiction of the Commission with respect to gas utility pipelines under this Act, the Commission has jurisdiction with respect to gas utility pipelines and exercises all the powers, functions and duties of the Alberta Energy Regulator set out in the *Pipeline Act* with respect to gas utility pipelines.

15. Section 3.1(2) of the *Pipeline Act* mirrors Section 4.1 of the *Gas Utilities Act* and states:

> **(2)** The Alberta Utilities Commission has jurisdiction with respect to gas utility pipelines and exercises all the powers, functions and duties of the Regulator with respect to gas utility pipelines.

16. Sections 6 and 16 of the *Pipeline Act* states that no person shall construct and operate a pipeline or any part of a pipeline without a licence issued pursuant to that act.

17. Section 17(1) of the *Alberta Utilities Commission Act* gives direction to the Commission on the approval of new gas utility pipelines and reads in part as follows:

> **17(1)** Where the Commission conducts a hearing or other proceeding on an application to construct or operate … a gas utility pipeline under the *Gas Utilities Act*, it shall, in addition to any other matters it may or must consider in conducting the hearing or other proceeding, give consideration to whether construction or operation of the proposed … gas utility pipeline is in the public interest, having regard to the social and economic effects of the… pipeline and the effects of the … pipeline on the environment.

18. According to Section 9 of the *Pipeline Act*, the Commission may grant a licence for a gas utility pipeline subject to any terms and conditions that it considers necessary.

19. The *Pipeline Rules* (a regulation under the *Pipeline Act*) set out the design requirements for pipelines in Alberta. Section 9(3) of those rules states that unless otherwise specified, the minimum requirements for the design, construction, testing, operation, maintenance, repair and leak detection of pipelines are set out in Canadian Standards Association Z662 - *Oil and Gas Pipeline Systems* (CSA Z662).

3.2 Pipeline design requirements (CSA Z662)

20. CSA Z662 establishes design requirements for pipelines and uses class location designations as a protective measure in pipeline design. CSA Z662 sets out four class location designations, ranging from Class 1 for pipelines in sparsely populated, rural areas with no more than 20 dwellings in the class location assessment area, to Class 4 for pipelines located in densely populated areas with multi-storey buildings.[3] CSA Z662 specifies design requirements for all classes of pipelines, including maximum operating pressures, pipe thickness, minimum yield strength, isolation valve spacing, and depth of cover.

21. Class 4 pipelines have the most stringent design requirements because they are designed to be operated in densely populated areas. For example, Class 4 pipelines must be designed to ensure that the maximum stress level for the pipeline is generally 44 per cent of specified minimum yield strength. On the other hand the maximum stress level for a Class 1 pipeline, is

[3] For a Class 4 pipeline the class location assessment area must contain a higher count of four (or more) storied buildings intended for human occupancy than of three - (or fewer) storied buildings intended for human occupancy.

generally 80 per cent of specified minimum yield strength. Patrick Bain, ATCO's manager of major projects, explained this difference in his testimony:

> So for simplicity sake, if a pipeline is at an 80 percent stress level versus a 40 percent stress level, it implies that the pipeline would be twice as thick to reduce down to the 40 percent or twice as strong or a combination of the two.[4]

22. Depth of cover requirements are also discussed in CSA Z662. It states that unless otherwise stated, the minimum allowable depth of cover for buried gas pipelines is 0.60 metres in all class locations. However, Section 20(1) of the *Pipeline Rules* states that the minimum depth of cover for any pipeline outside of a road or highway right-of-way shall be the greater of 0.80 metres and that specified in CSA Z662.

23. CSA Z662 requires a pipeline owner to have operational controls, including a risk management process that identifies, assesses and manages the hazards and associated risks for the life cycle of the pipeline.

4 The Calgary transportation and utility corridor

4.1 History of the Calgary transportation and utility corridor

24. As described earlier, the WCC project is proposed to be constructed predominantly within the Calgary TUC. ATCO's proposal to relocate its existing high-pressure pipelines in Edmonton and Calgary to their respective TUCs was a material factor in the Commission's approval of the UPR project. In paragraph 223 of Decision 2014-010, the Commission stated:

> The Commission is of the view that the TUC presents a unique opportunity to relocate infrastructure of this type away from densely populated areas and into a restricted development and use corridor designed to accommodate pipelines of this type.[5]

25. The Commission extensively reviewed the history and development of the Calgary TUC in paragraphs 683 to 707 of Decision 2011-436.[6] In that decision, the Commission observed that plans for formal TUCs in Edmonton and Calgary were completed in 1979 and that those plans allotted space for major power lines, pipelines, municipal services and other related facilities. A TUC policy document published by Alberta's Department of Infrastructure in 2004 described the objective of the TUC program as follows:

> The objective of the TUC Program is to facilitate the development of the cities of Calgary and Edmonton, their surrounding regions, and the province by accommodating within the TUCs the development of ring roads, storm water management facilities, major pipelines and power lines, and municipal services...
>
> The TUCs were established on the principle that long-term planning for the accommodation of a ring road and major utilities within a TUC can maximize its use. The TUCs protect ring roads and utility alignments from advancing urban development and

[4] Transcript, Volume 1, page 31.
[5] Decision 2014-010 (Errata).
[6] Paragraphs 22 to 34 are substantially reproduced from Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc. – Heartland Transmission Project at paragraphs 685 to 698, mutatis mutandis.

> offer a long-term solution to many of the land use problems associated with developing major linear facilities in urban areas.[7]

26. While Decision 2011-436 related to a 500-kilovolt transmission line, its findings with respect to the routing of that line within the Edmonton TUC are relevant to the Commission's consideration of this application, which is proposed for a similar corridor. Those findings were as follows:

> 705. The Commission understands that one of the underlying motivations for establishing the restricted development area was to contain environmentally harmful activities. That purpose, as reflected in the 1977 amendments to the legislation and regulations, has been found to be valid by both levels of Alberta's courts.
>
> 706. In accordance with this purpose, the government of Alberta has obtained title to almost all of the lands within the restricted development areas at considerable expense. Additionally, since 1979 the government of Alberta has engaged in an ongoing planning process for establishing a transportation and utility corridor within the restricted development area. Highways have been constructed in accordance with those plans, as have a large number of pipelines and five high voltage overhead transmission lines.[8]

4.2 The approval process for pipelines in the Calgary transportation and utility corridor

27. The regulations for the Calgary restricted development areas[9] provide that the Commission cannot issue an approval permitting the construction of a pipeline within the restricted development area without the written consent of the Minister of Infrastructure. Section 4(2) of the *Calgary Restricted Development Area Regulations* states:

> **(2)** No Minister of the Crown, government official or government agency shall, without the written consent of the Minister of Infrastructure, exercise any power under the *Municipal Government Act*, The *Pipe Line Act, 1975*, the *Water Resources Act* or any other Act to order, authorize, approve, permit or consent to any operation or activity that causes, is likely to cause or will cause a surface disturbance of any land in the Area, or issue or cause to be issued any order, authorization, approval, permit, licence or consent instrument for that purpose.

In light of the above, the Commission is satisfied that it has the jurisdiction to conditionally approve the WCC project but recognizes that it may not issue a permit and licence for the construction and operation of the WCC project until it receives the Minister of Infrastructure's written consent.

[7] Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc. – Heartland Transmission Project at paragraph 698.

[8] Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc. – Heartland Transmission Project paragraphs 704-707.

[9] The Calgary TUC is located within the Calgary Restricted Development Area.

5 Project description

28. In its application, ATCO described the WCC project as consisting of the following major components, each of which is shown on the map attached to this decision as Appendix B.

- A new 4.87-kilometre long, 508-millimetre Jumping Pound Tie-in Pipeline which would connect to ATCO's existing Jumping Pound Transmission Pipeline through a new above-ground valve assembly, near the intersection of 12 Mile Coulee Road and Tuscany Way N.W. From that location, the Jumping Pound Transmission Tie-in proceeds south, in a transmission line right-of-way owned by AltaLink Management Ltd. (AltaLink) and runs parallel to high-voltage transmission infrastructure. The pipeline then proceeds east next to the Bow River and continues to where it would enter the Calgary TUC and join with the proposed WCC project pipeline at the proposed Bearspaw Control Station near Scenic Bow Road and 101 Street N.W.

- A new 13.95-kilometre long, 508-millimetre WCC project pipeline, beginning at the new Bearspaw Control Station, would proceed south through the Calgary TUC, passing through the new West Springs Gate Station just south of the crossing of Old Banff Coach Road S.W., before continuing to the new Pinebrook Control Station and the new West Gate Station near the intersection of Lower Springbank Road and 101 Street S.W. The pipeline would then proceed to the southeast within the Calgary TUC until its endpoint at the new Sarcee Control Station near Glenmore Trail and Sarcee Trail S.W.

- A new 0.44-kilometre long, 88.9-millimetre Elbow Valley Lateral Tie-In Pipeline would connect to ATCO's existing Jumping Pound Transmission Pipeline on the upstream side of the new Pinebrook Control Station. Beginning within the station site, it would proceed south along the west boundary of the TUC to connect with ATCO's existing Elbow Valley Lateral pipeline near the intersection of Lower Springbank Road and 101 Street S.W.

- A new 0.67-kilometre long, 406.4-millimetre North Branch Tie-In Pipeline would begin at the new Sarcee Control Station near the intersection of Highway 8 and Glenmore Trail, and proceed north across the Calgary TUC and tie into ATCO's existing North Branch Line at an existing above-ground valve assembly near the intersection of Glenmore Trail and Sarcee Trail.

29. ATCO stated that the pipelines and facilities associated with the application would be fully contained within the TUC or Alberta Infrastructure lands, with the exception of the Jumping Pound Tie-in Pipeline, which would parallel AltaLink's existing high-voltage transmission infrastructure for the majority of the route.

30. ATCO indicated that the established practice for constructing pipelines within the TUC is to start from the outside of the designated pipeline area and progress inward with subsequent pipelines. It added that the consistent application of this planning principle within the TUC best allows for safe, orderly, and effective development of the TUC and avoids or minimizes land use conflicts among TUC infrastructure. ATCO explained that, in places where

Alberta Infrastructure has designated a pipeline corridor within the TUC throughout the limits of the project, it has done so on only one side of the TUC.[10]

31. With respect to the Jumping Pound Tie-in Pipeline, ATCO stated that AltaLink's right-of-way provides many of the same benefits found within the TUC: it is a dedicated corridor with existing utility infrastructure, it has established development boundaries, and it provides access for future pipeline maintenance. ATCO stated that the right-of-way is wholly owned and controlled by AltaLink for the sole purpose of linear infrastructure. ATCO noted that an AC mitigation system would be incorporated to protect the pipeline from AC current induced by the nearby high-voltage power lines.

5.1 Consultation

32. ATCO stated that it had completed consultation and notification in accordance with Rule 020: *Rules Respecting Gas Utility Pipelines.* Public consultation began in the third quarter of 2015 with notifications to all residents within 200 metres of the proposed project. The notice included an invitation to an open house which was held on October 26, 2015. ATCO also advertised the proposed project in the Calgary Herald and Calgary Sun on October 20, 2015. The program included consultation and confirmation of non-objection with directly-affected landowners throughout the consultation period. Because there were no operators of licensed pipelines or wells within five kilometers of the proposed WCC project, no industry notification or consultation was required. A summary table of the communications with all parties with concerns was filed with the application.[11]

33. At the hearing, ATCO explained its approach to consultation on the location of the WCC project pipelines. ATCO held consultation meetings with Alberta Infrastructure, Alberta Transportation, the City of Calgary and other stakeholders, in selecting the alignment of the proposed pipelines and facility locations for the WCC project in the TUC. The City of Calgary reviews and approves the alignment of utilities within municipal public thoroughfares, whereas Alberta Infrastructure reviews and approves the alignment of utilities and roads within the TUC.

34. During its meetings with Alberta Infrastructure, ATCO discussed the alignment of pipelines within the TUC and Alberta Infrastructure's approach to TUC development. ATCO received a letter of non-objection from Alberta Infrastructure on February 26, 2016. ATCO also consulted with AltaLink to purchase a right-of-way for the Jumping Pound Tie-in Pipeline within AltaLink's right-of-way.

35. ATCO stated that an adequacy assessment of consultation with Aboriginal groups was conducted for the entire length of the pipelines. The Aboriginal Consultation Office of the Government of Alberta determined that no consultation was required.

5.2 WCC pipeline design standards

36. ATCO designed the proposed WCC project pipelines as Class 4 pipelines under CSA Z662. It explained that Class 4 pipeline requirements are the most stringent design requirements and are intended for areas with the highest population density. ATCO indicated that although most of the areas along the proposed route would likely be designated as either Class 2 or Class 3 based on

[10] Exhibit 21591-X0036, Responses to Round 1Information Requests, Response to Information Request ATCO-AUC-2016-010(a), page 16 of 16.
[11] Exhibit 21591-X0007, Consultation Record.

the development and density that exists today, it designed all UPR projects to meet a Class 4 standard because any potential development could change the location class which, in turn, would require ATCO to replace the pipelines if they did not meet the new location class.[12]

37. ATCO explained that the purpose of location class design parameters listed in CSA Z662 is to ensure that the pipelines are designed for their intended location[13] and that CSA Z662 does not impose any setback requirements for pipelines designed to a Class 4 standard. ATCO added that, while it does not allow development on its right-of-way, it does not require any additional setbacks outside of the right-of-way.[14]

38. ATCO confirmed that for development applications, the City of Calgary requires a 15 metre setback from any habitable structure from the centerline of a pipeline. However, ATCO considers that this is a setback to ensure there is access to the pipeline for long-term maintenance, and is not a safety setback.[15]

39. According to ATCO, the new pipelines would be made of high quality steel consistent with modern pipe manufacturing practices. It explained that other factors that mitigate the threat of manufacturing defects include low operating stress levels and a pre-commissioning hydrostatic test in which the proposed pipeline is filled with water and pressurized to 1.4 times the maximum operating pressure. ATCO added that the purpose of this test is to ensure that any sub-critical manufacturing flaws will remain stable in a natural gas service environment.[16]

40. ATCO stated that welders and welding procedures for the WCC project would be qualified in accordance with CSA Z662. It explained that it uses non-destructive testing, i.e., X-rays and/or other non-destructive means, to examine 100 per cent of welds, and that its intended testing greatly exceeds the CSA Z662 requirement of 15 per cent.[17]

41. Instead of the 0.8 metres minimum burial depth by code[18] in Alberta, ATCO stated that the standard burial depth in the TUC would be 1.5 metres to the top of pipe and explained that it adopted this approach to give more flexibility to infrastructure for future grading and to provide added protection to the pipelines.[19]

42. ATCO stated that its ditching, lowering-in, and backfilling procedures include measures to ensure that objects that could damage or dent the pipe are not in contact with the pipe.[20] ATCO also clarified that it would run a caliper tool immediately after the hydrostatic test to detect dents that may have occurred during installation, backfilling or hydrostatic testing.[21]

[12] Transcript, Volume 1, pages 32-33.
[13] Transcript, Volume 1, pages 35, lines 23-24.
[14] Transcript, Volume 1, page 35, lines 2-5.
[15] Transcript, Volume 1, page 35 of 188, lines 11-19.
[16] Exhibit 21591-X0042, ATCO Threat Assessment, July 5, 2016, PDF page 35.
[17] Exhibit 21591-X0042, ATCO Threat Assessment, July 5, 2016, PDF page 17.
[18] Section 20(1)(c), Minimum earth cover, Alberta Pipeline Regulation 91/2005 – Pipeline Rules.
[19] Transcript, Volume 1, page 54 of 188, lines 1-15.
[20] Exhibit 21591-X0042, ATCO Threat Assessment, July 5, 2016, PDF page 11.
[21] Exhibit 21591-X0042, ATCO Threat Assessment, July 5, 2016, PDF page 12.

43. ATCO intends to install remotely-operated valves for this project which would be continuously monitored from its primary control centre.[22] The spacing between valves for the WCC project would generally be between four and six kilometres.[23]

5.3 Integrity management

44. ATCO provided a detailed explanation of its proposed integrity management program for the WCC project pipelines at the hearing, and stated that the tool it would use for in-line inspections on the WCC project pipelines incorporates a caliper, a magnetic flux leakage tool (MFL) and an inertial mapping tool (IMU). ATCO explained that the caliper detects any dents in the pipe resulting from construction damage, the MFL tool uses a magnetic field to detect physical metal loss on the pipe wall and provides information regarding pipe wall thickness at all locations around the pipe for its entire length, and that the IMU tool maps the location of the pipeline itself.

45. In testimony, ATCO's Director of Projects, Lance Radke described the importance of gathering baseline information prior to the commissioning of the pipelines:

> So with the new UPR pipelines, our standard practice is that we will do a baseline run upon completion of construction. And the purpose of that is really to establish the pipeline that has been installed. And it does two things. One, it will identify if there was any construction damage that may have occurred, perhaps backfilling on top of a rock that wasn't seen or things of that nature. The other is to ensure that we properly understand the pipe that was in there so that we can better assess the future inline inspection results. And what I mean by that is, obviously with a pipeline that we have a specified wall thickness for. There's a variable tolerance in there. It's a fairly tight tolerance, but by doing that original baseline inspection, when we come back in five to ten years to do the second, where you might be looking and thinking "We have a small corrosion (SIC) on this particular segment of pipe," you might be able to go back to the original baseline to understand that no, that particular piece of pipe was just slightly narrower than the other, within tolerance still. But that's what the baseline does.
>
> So for the new pipelines, typically it's going to be at about the ten-year mark. We say generally our lines that are inline inspectable, it's on an average of five to ten years. What drives that timeline is the run previous and the results of the previous run. So obviously with a new pipeline there's less of a need to inspect it as frequently. So you can go a longer period of time. Whereas an older pipeline, where maybe there was more issues that came up and that we exposed, we may recommend a shorter interval.[24]

46. ATCO stated that it would also conduct flame ionization surveys twice a year to search for potential leaks on the WCC project system. This would involve using trained personnel to walk over the entire length of the WCC project with equipment capable of detecting very small natural gas leaks.

5.4 Emergency response

47. ATCO explained that pipeline pressure and flow data for the WCC project will be continuously monitored at its control centre. It stated that a rupture on any of the pipelines would

[22] Transcript, Volume 1, page 20.
[23] According to CSA-Z662 isolation valves on natural gas pipelines must be spaced no more than 13 kilometres apart in a Class 3 location and no more than eight kilometres apart in a Class 4 location.
[24] Transcript, Volume 1, pages 38-40.

result in a quick pressure drop that would trigger an alarm at the control centre. ATCO noted that because of the ring design of the UPR project, the decision to shut-in a section of the pipeline system would not be very difficult because it would not result in an interruption of supply to the city.

48. ATCO added that once a decision to shut-in a section of one of the pipelines is made, a valve closure command is remotely implemented, after which it takes approximately 60 seconds for the valve to close. It explained that because isolating a particular segment of pipeline may require multiple valve closures, such valves can be closed concurrently.

49. ATCO stated that it has a corporate emergency response plan which covers its entire system, and that it typically conducts one table-top emergency response exercise per month and one live exercise annually. At the hearing, Mr. Radke stated that ATCO is willing to include any individuals who wished to be a part of any joint emergency response exercises conducted in the future.[25]

6 Landowner concerns

6.1 Views of the interveners

50. Ms. Frick, who owns and resides on a property adjacent to 101 Street S.W. near the proposed Pinebrook Control Station, expressed general concern about the risk of living in proximity to the proposed pipelines and the safety of the pipelines. Ms. Frick also had concerns about the four to six kilometres of spacing between the isolation valves on the WCC project. At the hearing, she had questions about emergency response procedures, where the gas in the pipelines would travel in the event of a leak and whether the gas was odorized. Ms. Frick also shared her concerns about the appearance of the proposed gate and control stations and asked if berms could be used to conceal the stations and if there were architectural guidelines in place.

51. Mr. Nam, Mr. Trnski and Mr. Lewis, each own and reside on properties located along 101 Street S.W. These interveners expressed safety concerns related to the proximity of the proposed pipeline to their homes and stated that the pipeline should be moved further east within the Calgary TUC. Mr. Nam pointed out that the proposed pipeline would be located only 18 metres from his bedroom. These interveners also expressed concerns regarding the encroachment of the municipal 15 metre building setback on their property.

52. Mr. Trnski also brought forth the concerns in a letter[26] from Mr. Miller and Mr. Trnski to ATCO on behalf of concerned citizens of 101 Street S.W. One of the primary concerns they raised was that all trees and natural vegetation would be removed during construction which would have a negative impact on all of the properties along 101 Street S.W. They believe that this would remove a natural barrier to noise from the planned ring road expansion. In addition, because there are no rear property fences along 101 Street S.W., and because children play in that area, they stated that there are fears that the pipeline construction would put them in danger. Mr. Miller and Mr. Trnski also had concerns with the risk of leaks and explosions. In addition,

[25] Transcript, Volume 1, page 49, lines 2 to 6.
[26] Exhibit 21591-X0009, Letter of objection from Mr. Miller and Mr. Trnski.

Mr. Trnski voiced his and Mr. Miller's concern that the pipeline would lower property values significantly.[27]

53. In their statement of intent to participate, Mr. and Mrs. Lewis also expressed concern about the potential environmental impact of the proposed pipeline arising from tree removal. They stated that this will remove snow inhibitors and reduce wildlife reserves, particularly for birds.

6.2 Views of ATCO

54. In response to the concerns expressed by Ms. Frick, Mr. Radke explained that the gas would be odorized and that in the event of a small leak, the particular section of pipeline would be isolated and the gas would be flared off at more controlled points. Any leaking gas would rise because it is lighter than air. Mr. Radke confirmed that ATCO would be responsible for the work on the pipeline and the fire department would be responsible for ensuring that the affected area is safe, handling evacuations and preventing people from entering a dangerous area.[28]

55. With respect to the appearance of the proposed control station, Mr. Radke stated that although there are no architectural guidelines for its facilities, ATCO has started to improve the appearance of the fencing to address these concerns. He added that he sent pictures of the proposed stations to interested residents and that ATCO would welcome any input in this regard.[29] Mr. Radke also confirmed that ATCO does not use berms around its facilities because they would require additional space and land.

56. Mr. Radke stated that the 15 metre setback referred to by Mr. Nam, Mr. Trnski and Mr. Lewis is not a safety setback but is imposed by the City of Calgary to provide access to the pipeline. Mr. Radke clarified that because the proposed location of the WCC project pipelines is 10 metres east of the TUC boundary, there will only be a five metre buffer on the properties along 101 Street S.W., where development may ultimately be restricted by the City of Calgary.

57. Mr. Radke addressed Mr. Nam's concern, noting that the WCC project pipelines will be designed to safely operate even in areas where there are hospitals, schools, high-rise apartments and houses, and further that there are many similar pipelines operating even closer to buildings than the 18 metre distance between Mr. Nam's house and the proposed pipeline.

58. Mr. Radke testified that the WCC project pipelines could not be located on the east side of the TUC as requested by these interveners because that section of the TUC is reserved for further roadway construction. He explained that locating the first pipeline, which is the WCC project pipeline, furthest out (closest to the western boundary of the TUC) ensures that the pipeline does not take up more room than necessary and that the TUC can effectively accommodate the most infrastructure. Mr. Radke stated that this approach provides greater flexibility in the future for pipelines and electric transmission lines, and that building pipelines starting from the outside to the inside reduces the risks inherent with working over existing pipelines to install future pipelines.[30]

[27] Transcript, Volume 1, pages 137 to 138.
[28] Transcript, Volume 1, pages 64 to 67.
[29] Transcript, Volume 1, pages 68 to 69.
[30] Transcript, Volume 1, pages 71 to 74 pages 80 to 90.

59. ATCO stated that the pipeline right-of-way would be kept clear of trees and shrubs to allow for vehicle access to monitor and, if necessary, repair the pipeline. It also submitted that the TUC had been in place for nearly four decades and that residents who subsequently acquired lands adjacent to the TUC ought to have known that future transportation and utility development would occur in the TUC.

60. ATCO filed an environmental protection plan for the WCC project.[31] The plan, prepared by Golder Associates, described more than 450 mitigation measures that would be implemented during construction and reclamation of the WCC project "to minimize disturbance to environmental resources, and promote terrain stability and the successful restoration of disturbed areas."[32] The mitigation measures listed in the environmental protection plan related to all stages of the proposed project, from pre-construction activities to reclamation.

61. ATCO stated that it would comply with the code of practice in accordance with the *Water Act* for all watercourse and wetland crossings.

62. ATCO also received *Historical Resources Act* approval for the WCC project.[33] In accordance with that approval, it is required to conduct a Historical Resources Impact Assessment for paleontological resources. ATCO indicated that the assessment is currently underway and would be completed in accordance with the conditions and timing set out within the approval.

63. ATCO filed noise impact assessments[34] (NIAs) for each of the proposed stations associated with the WCC project. All of the NIAs indicated that the noise levels would be compliant with the permissible sound levels set forth in Rule 012: *Noise Control.*

6.3 Commission findings

64. The Commission recognizes that many of the interveners expressed safety concerns with the proximity of the proposed pipeline to their respective lands and homes. In the Commission's view, ATCO has taken significant and effective steps to mitigate these concerns, by proactively designing the proposed pipelines to Class 4 standards under CSA Z662. The Commission observes that this is the most stringent of the location classes. Other proactive and effective steps taken by ATCO to mitigate safety concerns include:

- The proposed WCC project pipelines will be constructed primarily within the TUC and the AltaLink transmission right-of-way, which have limited third-party access and will in turn reduce the potential for third-party disturbances and pipeline strikes.
- The standard depth of cover for the pipelines will be 1.5 metres to the top of the pipelines, which exceeds the requirements in Alberta of 0.8 metres for general depth of cover and 1.4 metres under highways.
- The pipelines will be made of high-quality steel, consistent with modern pipe manufacturing processes and will have a high-quality coating.

[31] Exhibit 21591-X0019, Environmental Protection Plan.
[32] Ibid, page 1.
[33] Exhibit 21591-X0020, Historical Resources Act Approval.
[34] Exhibits 21591-X0013 to 21591-X0016, Noise Impact Assessments.

- 100 per cent of all pipeline welds will be non-destructively inspected using radiography to ensure weld integrity.

- The pipelines will be hydro-tested prior to operation by filling it with water and increasing the pressure to 1.4 times the maximum operating pressure of the pipelines.

- The pipelines will be fully inspectable by in-line inspection methods and a comprehensive base-line inspection will be conducted prior to the pipelines being operated.

- The pipelines will be subject to comprehensive, in-line inspections at appropriate time intervals.

- The isolation valves on the pipelines will have remote control capabilities and will be effectively spaced to allow ATCO to isolate relatively small sections of the pipeline which, in turn, will limit the amount of escaping gas in the event of a rupture.

- Once operating, the pipelines will be continuously monitored by ATCO at its central operations control room.

- ATCO will conduct flame ionization surveys on the WCC project pipelines twice a year to detect potential leaks.

- ATCO regularly conducts table-top and live emergency response exercises.

65. Mr. Nam, Mr. Trnski and Mr. and Mrs. Lewis all requested that the Commission direct ATCO to move the proposed WCC project pipelines further to the east within the pipeline component of the TUC. While the Commission understands that this would increase the distance between their homes and properties and the proposed pipeline, it does not consider that this would materially change the risk associated with the proposed pipelines, given the stringent design standards of the WCC project pipelines, the integrity management program proposed and the relatively limited width of the pipeline component.

66. The Commission finds that Alberta Infrastructure's decision to require pipeline development from the outside - in is reasonable for the development of the Calgary TUC, and that this approach limits, to the extent practical, the potential for third party damage to the pipeline when new pipelines or other utility infrastructure are added to the TUC in the future. Furthermore, development in this manner is consistent with the long-term planning principles that Alberta Infrastructure and its predecessors have applied within Alberta TUCs to ensure the safe and efficient development of each corridor.

67. Some interveners also expressed concern about the potential for property value impacts and development restrictions given the proximity of the proposed pipelines to their homes and properties. When questioned by Commission counsel, both Mr. Nam and Mr. Trnski acknowledged that they were aware that their respective properties shared a boundary with the TUC when they purchased those properties. However, each indicated that they were unaware at that time that development in the TUC could include the construction and operation of one or more pipelines.

68. It was Mr. Trnski's evidence, as a former real estate agent, that the presence of the proposed line could reduce the number of potential buyers for homes and properties adjacent to the pipeline and lower the property values in the neighborhood. Mr. Trnski filed no documentary evidence in support of this claim nor did he file an expert report on the issue.

69. While the Commission considers that there may be some potential for property value impacts associated with the proposed project, it is also likely that the purchase price for properties located immediately adjacent to the TUC reflected the potential for such development in the future. Furthermore, these properties will soon be in the first row of properties adjacent to the Stoney Trail southwest Calgary ring road extension. In the Commission's view, the construction of the ring road project is likely to have a greater influence on property values than the development of the WCC project.

70. Although the Commission recognizes that construction of the proposed pipeline will result in some tree clearing within the TUC, it is satisfied that these and other environmental impacts associated with the WCC project can be effectively mitigated by ATCO in implementing its environmental protection plan. Accordingly, the Commission will direct ATCO to implement and adhere to its environmental protection plan as a condition of any approval it issues for the WCC project. The Commission concludes that the concerns expressed by the interveners in this proceeding may be effectively mitigated by ATCO and that the pipeline can be operated safely in the location proposed by ATCO.

7 The concerns of Burnswest Corporation

7.1 Views of Burnswest Corporation

71. Travis Coates appeared at the hearing as a witness for Burnswest/Burnco. Mr. Coates indicated that Burnswest owns two parcels of land, referred to as the Lowry and Gimble properties and leases another parcel, known as the TUC property, all of which are located along the pipeline route near the intersection of Old Banff Coach Road and 101 Street S.W. He explained that gravel from the Lowry and TUC properties is currently processed at a facility it owns, located to the west of those properties.

72. The Burnswest/Burnco lands and the gravel processing facility are shown in the Google Earth image below. The blue lines show the approximate location of the TUC boundaries, the green line shows the proposed location of the WCC project pipelines and the red line shows the approximate property lines[35] of the Burnswest properties that are the focus of that intervener's objection.

[35] The Burnswest property lines shown in red in the image above are based on Mr. Coates description of the properties found in the transcript at pages 124 to 126. They have been included for illustrative purposes only.

73. Mr. Coates stated that all gravel resources have already been extracted from the TUC property and that it is currently reclaiming that land. With respect to the Lowry property, Mr. Coates explained that all gravel resources within 30 metres of the western TUC boundary have also been extracted but that reclamation activities within that 30 metre zone are incomplete.

74. Mr. Coats testified that although there has been no gravel extraction from the Gimble property to date and that Burnco has no immediate plans to extract gravel from that location, extraction from the Gimble property could begin within the next ten years.

75. Mr. Coates explained that Burnswest had the following concerns about the proposed WCC project pipeline.

- The pipeline might sterilize approximately 395,000 tonnes of gravel underlying the Gimble property.
- Impact of the proposed pipeline on its ongoing reclamation on the Lowry lands.
- The pipeline could create a barrier to Burnco's heavy equipment between the Lowry property and the TUC property.

76. Mr. Coates stated that its sterilization concerns arise from a requirement in Section 535(1)(d) of the *Occupational Health and Safety Code 2009*, (OH&S Code) which states:

> **535(1)** An employer at a surface mine must ensure that there is no excavation within
>
> (d) 30 metres of a right of way for a pipeline or other utility corridor.

77. Mr. Coates submitted that the 30 metre OH&S Code setback could be waived with the consent of the owner or operator, and noted that Alberta Infrastructure had granted such a waiver

when it provided Burnco with its mining leases on the TUC property. Mr. Coates proposed that a proximity agreement between Burnco and ATCO that provided for a relaxed setback could address its concerns. Alternatively, Mr. Coates stated that Burnswest/Burnco's sterilization concerns could also be addressed by compensation.

78. Mr. Coates also recognized that additional setback requirements that apply to its gravel mining operations are set out in Alberta Environment and Parks' *Guide of the Code of Practice for Pits*, and agreed that any setback under that guide has nothing to do with ATCO's proposed project.

79. Mr. Coates submitted that, because the WCC project triggered the need for the proximity agreement, ATCO should be responsible for any costs associated with mitigating the impact of its proposed pipelines on Burnco's mining operations, including geotechnical studies required to determine minimum sloping and setback distances.

80. Mr. Coates explained that maintaining access to the TUC remains a critical aspect of its business and that lack of access could impair its competitive advantage in upcoming projects such as the west Calgary ring road. He stated that it was unclear if the proposed pipelines would be constructed to allow its heavy equipment to cross it and if not, who would be responsible for paying for the necessary reinforcements to allow crossing. Mr. Coates expressed confidence in reaching a crossing agreement with ATCO but stated that the company remains concerned with potential delays and responsibility for costs.

81. Mr. Coates stated that Burnswest/Burnco had discussed its concerns with ATCO but had been unable to resolve them. He requested, on behalf of Burnswest/Burnco, that the Commission delay its decision on ATCO's applications to allow time for further negotiations with ATCO.

82. In response to questions from Commission counsel, Mr. Coates acknowledged that one of the barriers to a proximity agreement was a disagreement with ATCO about who should be responsible for paying the associated geotechnical costs. Mr. Coates also testified that ATCO should recognize that it is its project that will sterilize gravel reserves and that it should work with Burnswest/Burnco on a compensation arrangement.

7.2 Views of ATCO

83. ATCO stated that it understood that Burnswest purchased the lands in question well after the TUC had been established and that it knew, or ought to have known, that the lands were directly adjacent to the pipeline component of the TUC and would be subject to the 30-metre OH&S Code setback. ATCO submitted that the OH&S Code setback applies to the TUC itself and not to the pipelines, and that Burnco's sterilization concerns have no connection to the WCC project.

84. ATCO submitted that another setback applicable to the Burnswest/Burnco lands is found in Section 622 of Alberta Environment and Parks' *Guide to the Code of Practice for Pits*. Based on information in the Burnswest SIP regarding estimated gravel depth, and using the 1.5 (horizontal) to 1 (vertical) pit slope design and a three metre property line setback described in that guide, ATCO estimated that Burnco could be required to maintain an extraction setback of approximately 39.2 metres.

85. ATCO stated that it is willing to work with Burnswest/Burnco to relax any requirements under the OH&S Code to the extent that it can be done safely and without any impact to the

necessary ground support for its right-of-way. It also committed to working with Burnswest/Burnco to ensure that Burnswest/Burnco would have access across the right-of-way to service any future projects within the TUC lands.

7.3 Commission findings

86. Burnswest/Burnco expressed two primary concerns regarding the proposed WCC project pipelines. First, it is concerned about the potential for gravel sterilization on the Gimble property arising from the 30 metre OH&S Code setback and second, that approval of the project may impair its ability to access its leased TUC property.

87. Burnswest/Burnco proposed two remedies for the potential sterilization of its gravel reserves: a proximity agreement with ATCO, with ATCO paying for any associated geotechnical work, and compensation for any sterilized gravel reserves.

88. Section 535(1)(d) of the OH&S Code prohibits excavations within 30 metres of a pipeline or other utility corridor. The plain and ordinary meaning of this provision is that the Burnswest/Burnco lands are subject to a 30 metre setback from the TUC boundary, regardless of whether or not the proposed pipelines are approved. Further, the *Guide to the Code of Practice for Pits* also requires an excavation setback from the property line of the Gimble property that, depending upon pit slope, could potentially exceed that required by the OH&S Code. This setback is also independent of the proposed pipelines.

89. Given these facts, it is not clear to the Commission that any potential sterilization of the gravel reserves underlying the Gimble lands can be directly or exclusively attributed to the proposed WCC project pipelines. Regardless, the Commission has no jurisdiction to address matters of compensation arising from sterilization or otherwise.

90. The evidence before the Commission is that both setbacks may be relaxed in certain circumstances. Further, both parties expressed a willingness to work together on the required setbacks. The Commission encourages ATCO and Burnswest/Burnco to work together to resolve this concern.

91. Burnswest/Burnco is also concerned that approval of the proposed project could limit its access between its Lowry and TUC properties. However, the record of the proceeding shows that ATCO recently met with Burnswest/Burnco to:

> request the specific information so that we can ensure that the pipeline can accommodate that if they have particularly heavy haul vehicles, which I would expect they might, but we don't see any issue with granting that crossing.[36]

92. Burnswest/Burnco is in a unique position in that it has an interest in land within the TUC that is immediately adjacent to lands that it owns outside of the TUC. The Commission recognizes that Burnswest/Burnco's ongoing ability to access its TUC property and the TUC itself is important to its future business plans. In the Commission's view, approval of the proposed project should not result in any change to Burnswest/Burnco's access between its two properties. Accordingly, the Commission will direct ATCO, as a condition of any approval it may issue for this project, to ensure that the WCC project is designed and constructed to accommodate the crossing of heavy haul vehicles at a specified, suitable location between

[36] Transcript, Volume 1, page 60.

Burnswest/Burnco's Lowry and TUC properties that will be clearly marked and identified. The Commission expects ATCO to work with Burnswest/Burnco to ensure that the pipeline design is consistent with its crossing needs and adequately accounts for the types of vehicles that will use the crossing.

8 Conclusion

93. The Commission finds that ATCO completed consultation and notification in accordance with Rule 020 and that its public involvement program was suitable in the circumstances.

94. The Commission finds that the risks associated with the pipelines can be effectively mitigated by the application of the stringent CSA Z662 design standards, ATCO's proposal to exceed many of those design standards, its integrity management and inspection process, and its corporate emergency response plan. The Commission is therefore satisfied that ATCO can construct and operate the WCC project pipelines in a safe and reliable manner in their proposed locations.

95. Further, the Commission finds that ATCO's decision to locate the pipelines primarily within the TUC and the AltaLink right-of-way will also mitigate the risk associated with the proposed pipelines. By developing the pipelines in these locations, the potential for third-party damage to the pipelines from future facility construction will be reduced. As mentioned earlier, such an approach is consistent with the long-term planning principles applied by Alberta Infrastructure and its predecessors.

96. The Commission finds that ATCO's adherence to the measures set out in its environmental protection plan will effectively mitigate the environmental impacts of the proposed project and address many of the environmental concerns raised by participants. Accordingly, the Commission will direct ATCO, as a condition of the approval it issues for the WCC project, to implement and adhere to its environmental protection plan.

97. The Commission expects ATCO to abide by the conditions set forth in the *Historical Resources Act* approval granted by Alberta Culture on December 15, 2015.

98. The Commission is satisfied that the information submitted by ATCO in its application fulfills the requirements of Rule 012: *Noise Control.*

99. The Commission finds that Burnswest/Burnco's access concerns may be effectively mitigated by requiring ATCO to design and construct the pipeline so that the heavy equipment used by those companies may cross between its two properties over the pipeline at a specified location. The Commission finds the gravel sterilization concerns raised by Burnswest/Burnco to be speculative at this time. Moreover it lacks the jurisdiction to address any associated issues of compensation.

9 Decision

100. Having regard to the foregoing, the Commission finds that approval of ATCO's application for the WCC project pipelines is in the public interest and should be approved subject

to the conditions set out in the order below. The Commission finds that the risk associated with the WCC project pipelines is acceptable and is satisfied that the pipelines can be operated safely.

101. The Commission cannot issue a licence for the construction and operation of the WCC project within the Calgary TUC corridor without the prior written consent of the Minister of Infrastructure. Accordingly, ATCO must advise the Commission in writing once it has obtained that consent. The Commission will issue the necessary licences for the WCC project pipelines once it has been so advised.

10 Order

102. It is hereby ordered that Application 21591-A001 and the necessary amendments to Licence 1952 are approved pursuant to Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act*, subject to the conditions listed below.

(1) ATCO shall obtain written consent from the Minister of Infrastructure for the construction and operation of the WCC project within the Calgary TUC and provide the Commission with written confirmation of that consent. Upon receipt of that consent, the Commission will issue the necessary licences.
(2) ATCO shall implement and adhere to its environmental protection plan. If ATCO determines that any material changes to the measures set out in the environmental protection plan are required, ATCO must advise the Commission in writing of such changes and the reason for the changes. Following completion of the project, including any necessary reclamation, ATCO shall confirm to the Commission in writing, by a post-approval filing in this proceeding, that it has implemented all necessary and required mitigation measures set out in the environmental protection plan.
(3) ATCO shall ensure that the WCC project is designed and constructed to accommodate the crossing of heavy haul vehicles at a specified, suitable, well-marked location between Burnswest/Burnco's Lowry and TUC properties.

Dated on February 21, 2017.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Panel Chair

(original signed by)

Neil Jamieson
Commission Member

(original signed by)

Kate Coolidge
Acting Commission Member

Appendix A – Oral hearing – registered appearances

Name of organization (abbreviation) counsel or representative
ATCO Gas and Pipelines Ltd. (South) L. Radke P. Bain Counsel Bennett Jones LLP S. Munro B. Williams
C. Frick
M. Nam
Burnswest Corporation T. Coates
M. Trnski
R. Lewis

Alberta Utilities Commission

Commission Panel
Anne Michaud, Commission Member, Panel Chair
Neil Jamieson, Commission Member
Kate Coolidge, Acting Commission Member

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B. Yanchula
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Appendix B – Proposed route for the West Calgary Connector Pipelines