

November 22, 2022

Sharing Geological Pore Space Disposal Capacity

By: Nigel Bankes

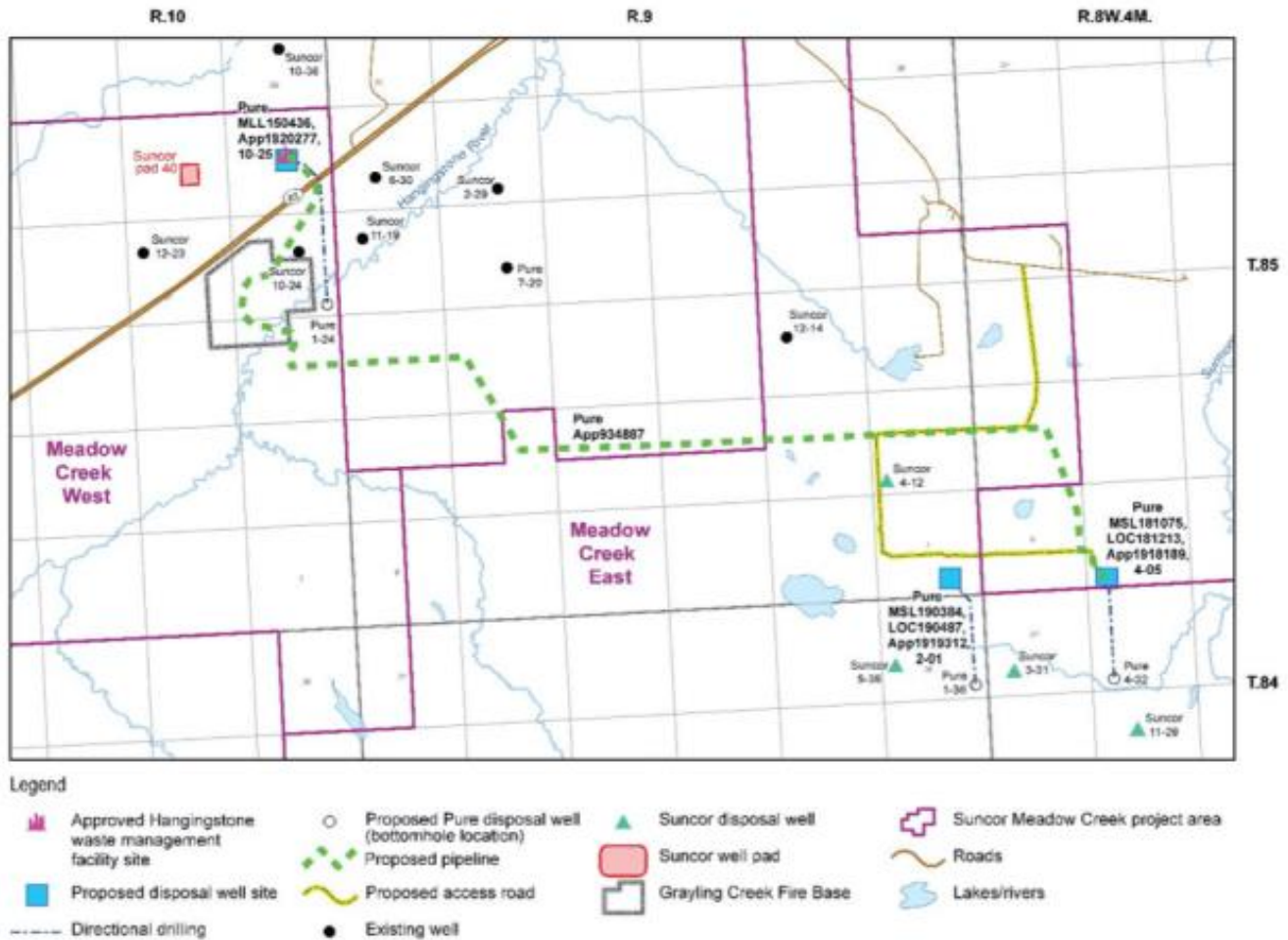
Decision commented on: [2022 ABAER 004](#), Pure Environmental Waste Management Ltd., Applications 1614037, 1784753, 1809825, 1928016, 1928017, 1928430, 30602032, 30608918, and 30608934 Hangingstone Project, October 20, 2022

This decision is a follow-up decision to two decisions from 2020 dealing with Pure Environmental Waste Management’s Hangingstone waste disposal project: [2020 ABAER 004](#) and [2020 ABAER 005](#). I commented on those two decisions here: “[More Competition For Underground Disposal Space](#)” and I refer readers to that earlier comment for a more detailed account of the facts.

Pure’s project involved disposal of waste into salt caverns. In order to create the salt caverns through solution mining, Pure needed to be able to dispose of the resulting brine into geological pore space in the project area. The chosen formation was the Keg River formation but the snag for Pure was that Suncor was also targeting the same formation to dispose of wastes that it anticipated from its adjacent Meadow Creek in situ oilsands projects. Suncor filed statements of concern and a regulatory appeal (hence the two decisions). Suncor objected to the project and the proposed injection wells on the basis that Pure’s activities would interfere with its project and occupy disposal pore space that Suncor was targeting for its own operations.

The configuration of Pure’s facility and its original proposed injection wells in relation to Suncor facilities can be observed in the diagram below (reproduced as Figure 1 in each of the earlier decisions). Pure’s facility is in the NW corner of the figure.

Figure 1. The Original Application



In its earlier decisions the AER approved the basic concept for Pure’s project, as well as one of Pure’s proposed injection wells located close to Pure’s facility but rejected its application for the approval of two other injection wells with locations much closer to existing Suncor injection wells.

Subsequently, Pure filed amended applications including applications for two new disposal wells (the 07-16 and the 09-19 wells) located much closer to Pure’s main facility. Suncor once again filed statements of concern, and initially opposed Pure’s application and filed written submissions in response in April 2021. However, the parties then requested an adjournment of the scheduled hearing to permit further discussions between them (at para 23). Seven months later, Pure and Suncor filed a joint submission outlining a proposed disposition of the application “based on a commercial agreement” the parties had reached (at para 24). The joint submission is a matter of public record and can be found [here](#). Following a further joint response to the AER’s request for clarification, the AER circulated two draft approval documents to the parties for their review and comment. After a further round of exchanges in which Pure provided comments on behalf of both parties, the AER Hearing Panel concluded that there was no need for a hearing and issued the decision that is the subject of this comment.

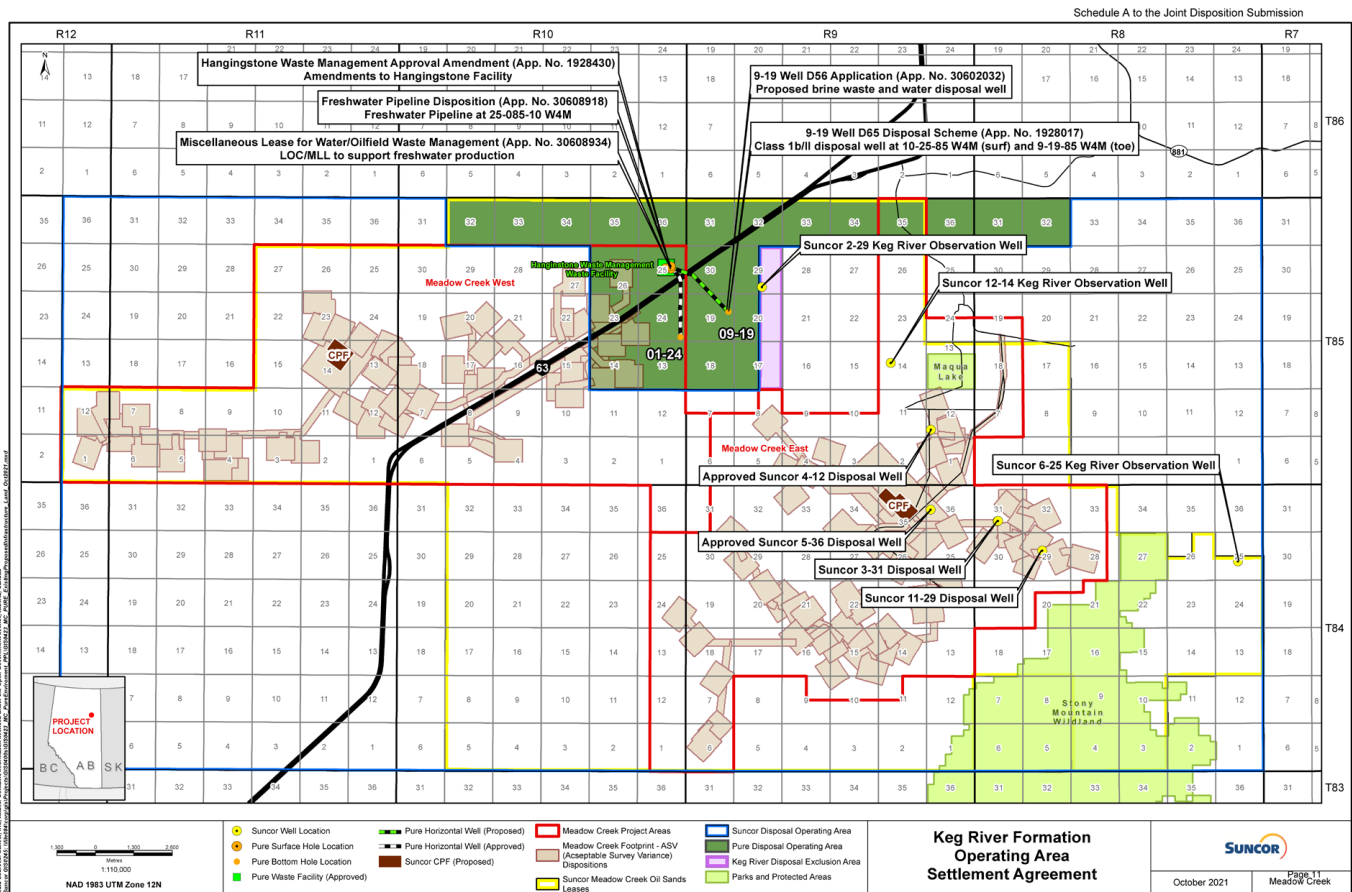
The decision approves the drilling of a single additional disposal well (09-19), as depicted in Figure 2 below. This figure is taken from the joint submission and reproduced as Appendix 2 in the AER's decision. In addition, the decision rejects the applications associated with the 07-16 well, all as requested in the joint submission. Also appended to the decision are two draft approvals: one for the disposal facility itself (Appendix 4, part 1) and the other a scheme approval for the disposal operation including the 09-19 well (Appendix 4, part 2). The approvals pick up on the terms of the joint submission as discussed below.

The Joint Submission

The joint submission, along with an associated commercial agreement, represents a negotiated and expedient settlement of the dispute (or at least a difference of opinion) between the parties as to how to “apportion” the disposal capacity of the Keg River formation in the area of interest. The apportionment is not a volumetric apportionment, although the joint submission does restrict the average daily injection rate of the 09-19. Instead, the joint submission seeks to effect an apportionment based upon the creation of three areas of interest: the Suncor Disposal Operating Area (blue), the Pure Disposal Operating Area (dark green), and the Keg River Disposal Exclusion Area (purple), as depicted in Figure 2. The joint submission gives effect to this “apportionment” by rejecting Pure's application for the 07-16 well and by a recital to the effect that each party has covenanted with the other in their commercial agreement that neither will make, or cause or encourage any other party to make, any disposal related applications with respect to the operating area of the other or the exclusion area (Decision at paras 70 & 71).

Absent the joint submission, Pure faced the real risk that it would not obtain an approval for any injection well, with the necessary implication that it could not develop its cavern storage and thus its waste storage facility. However, the joint submission made it clear that it was made on a without prejudice basis in the sense that if the AER was not minded to accept the joint submission, both parties reserved the right to revert to their original positions and seek relief based upon those positions.

Figure 2: Depicting the Disposal Operating Areas and Exclusion Area



The Panel Decision and the Draft Approvals

Both the parties and the Panel (at para 62) were fully aware that the joint submission could not be dispositive of Pure’s applications; the panel still had to exercise its independent judgment and fulfil its statutory responsibilities under the *Oil and Gas Conservation Act*, [RSA 2000, c 0-6 \(OGCA\)](#), the *Responsible Energy Development Act*, [SA 2012 c R-17.3 \(REDA\)](#) and its *General Regulation*, [Alta Reg 90/213](#), and under the *Pipeline Act*, [RSA 2000, c P-15](#).

Denial of the Proposed 07-16 Well

The Panel justified rejecting the application for the 07-16 well on the basis that such a rejection would mitigate the “potential impacts on Suncor’s disposal wells resulting from the volume or quality of wastewater disposed of by Pure in its disposal operating area” (at para 80). However, the Panel warned the parties that it had no jurisdiction over any future application and that it was up to the parties themselves to monitor and uphold their commitments, although the Panel did indicate that their commitments might well support a future statement of concern (at para 80). That said, the actual terms of the facility approval and the scheme approval do give Suncor a leg up insofar as s 2 of facility approval (Appendix 4, part 1) provides that:

The Approval Holder shall not drill and operate, nor contract any third party to drill and operate, any disposal well at a surface or bottomhole location inside the [Suncor Operating Area or the Exclusion Area]. Any amendment to this condition requires an amendment to [the] Disposal Scheme Approval ...

There is a similar provision in the scheme approval (scheme approval, at s 16). The Panel explained that it included the provision in both approvals to address any uncertainties that might arise should ownership of the facility approval and the scheme approval become severed (at para 86).

The 09-19 Disposal Well and Associated Scheme Approval

The Joint Submission contemplated approval of the 09-19 well and the associated injection scheme but subject to a number of terms and conditions designed to provide Suncor with information as to its operation. The Panel accepted that the approval of this well would contribute to the viability of Pure's waste facility and mitigate risks to Suncor's Meadow Creek project. Both the submission and the draft scheme approval (Appendix 4, part 2, s 13) make it clear that Pure's obligations to provide information to Suncor shall also extend to "any successor operator of the Meadow Creek" projects. The Panel also noted that "the conditions will provide both parties with more information on volume and injectivity characteristics in the Keg River Formation" (at para 83).

The Panel also agreed to include, in the scheme approval, the proposed maximum injection rate for the 09-19 well on the basis that this would provide:

... a mechanism to limit both the total annual volume of fluids that Pure can inject and the associated rate of pressure increase that may occur in the formation due to injection operations. This maximum daily average injection rate helps mitigate the potential risk of interference with Suncor's proposed disposal operations and balances Pure's and Suncor's needs for disposal capacity in the Hangingstone area. (at para 87)

Binding Suncor and Any Successors in Interest

Both the Joint Submission and the Panel (at para 74) recognized that the only applications that were before it, and therefore the only approvals that could be made the subject of conditions to reflect the commitments that each party made to the other, were those of Pure. Nevertheless, both parties urged the Panel to include a memorandum of Suncor's relevant approvals recording the terms of its commitments. The parties also noted that Suncor agreed to having these commitments recorded in its own project approvals in the future when seeking any renewal or amendment of those conditions. Appendix 3 of the decision dutifully records that:

- Neither party will drill or conduct disposal operations or cause third parties to drill or conduct disposal operations within each other's operating area or the exclusion area, as shown on the map in appendix 2.

- Suncor will request to the AER that its commitments be included as conditions of approvals IA-001 and PIA-003 when an application for renewal or amendment is submitted.

Overall Public Interest

The Panel’s overall conclusion was that the joint submission, as operationalized in the terms and conditions of the facility and scheme approvals, served both the AER’s public interest mandate as expressed in the *Pipeline Act* and the General Regulation under *REDA*, as well as the AER’s mandate under s 4 of the *OGCA*:

(a) to effect the conservation of, and to prevent the waste of, the oil and gas resources of Alberta;

(b) to secure the observance of safe and efficient practices in the locating, spacing, drilling, equipping, constructing, completing, reworking, testing, operating, maintenance, repair, suspension and abandonment of wells and facilities and in operations for the production of oil and gas or the storage or disposal of substances;

(c) to provide for the economic, orderly, efficient and responsible development in the public interest of the oil and gas resources of Alberta. (at paras 12, 97 – 99)

In summary, the panel noted that the proposed disposition offered a balanced approach that provided Pure with “access to the disposal capacity it needs to operationalize the Hangingstone project while minimizing potential adverse effects on bitumen recovery at the Meadow Creek projects” (at para 98).

Commentary

It seems clear that there will be increased competition for access to geological pore space, not only in the context of waste disposal but also for other purposes such as carbon capture and storage (CCS) projects. The province, for example, has recently allowed [25 CCS projects to proceed to evaluation](#). Any evaluation activity that requires the drilling of a well will require the AER’s approval, as will any decision to allow injection (see my [earlier post](#) on the AER’s approval of Shell’s Quest project, [AERCB Decision 2012 – 008](#).) I anticipate that one matter that the AER will need to consider will be the implications of a CCS project (and its associated pressure front) for any other proposed projects in the vicinity proposing to use the same target formation. This will be in addition to the AER’s existing duty under s 391.1 of the *OGCA* not to approve a CCS project (or at least one that is operating on an agreement under Part 9 of the *Mines and Minerals Act*, [RSA 2000, c M-17](#)) unless satisfied that the project “will not interfere with ... the recovery or conservation of oil or gas” or an existing storage project.

This decision and the supporting Joint Submission offer an innovative means of resolving a dispute between operators as to the nature of the pore space resource and its “apportionment”. But questions remain as to whether this is the best approach to resolving these issues. I explored

some of these challenges in my earlier post (referenced above) on the first two Hangingstone decisions and I refer readers to those observations.

This post may be cited as: Nigel Bankes, “Sharing Geological Pore Space Disposal Capacity” (November 22, 2022), online: ABlawg, http://ablawg.ca/wp-content/uploads/2022/11/Blog_NB_Geological_Pore_Disposal.pdf

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