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**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING**

In re Brook Mining Co., LLC coal mine)
permit – PT0841) **Docket No. 20-4802**

**DEPARTMENT OF ENVIRONMENTAL QUALITY'S REPLY
IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

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INTRODUCTION

Before initiating highwall mining in any future panel, Brook must: (1) test and analyze the roof, coal, and floor layers from at least three core samples; (2) prove, using a geostatistical algorithm, that these samples adequately characterize an entire panel; (3) conduct axial compression tests, axial and diametral point load tests, slake durability tests, consolidated-drained triaxial tests, and Atterberg limits tests on each core sample; (4) provide the geotechnical data and analysis to the Department of Environmental Quality; (5) revise its mine and subsidence control plans to account for new findings regarding the strength of the roof, floor, and coal layers; and (6) receive the Department's written approval to proceed with highwall mining activities. (DEQ Ex. 9 at 4-5; DEQ Ex. 5 at 379).

The Powder River Basin Resource Council does not question the adequacy of this testing and analysis regimen. (*See, e.g.,* PRBRC Resp. to Mot. to Strike at 5) (noting that the Resource Council did not present “an [expert] opinion on the content of either Condition 9 or 10”). Instead, the Resource Council only disputes the timing of the required testing and analysis. (PRBRC Resp. to DEQ Mot. for Summ. J. at 2). According to the Resource Council, the Department could not approve Brook's permit application without complete geotechnical testing and analysis for every future mining area. (*Id.*). In fact, the Resource Council argues that the Council's 2017 decision mandates this outcome. (*Id.* at 2-3). Contrary to the Resource Council's assertion, however, the Council's 2017 decision

was limited to a unique set of facts and does not preclude Brook from submitting additional subsidence-related data and analysis in future years.¹

ARGUMENT

I. The Council's 2017 findings were fact-specific.

In 2017, the Council concluded that Brook's subsidence control plan was incomplete under Wyo. Stat. Ann. § 35-11-406(n)(i) and deficient under Wyo. Stat. Ann. § 35-11-406(b). *In re Brook Mine Application*, Findings of Fact, Conclusions of Law, and Order, No. 17-4802, slip op. 28 (EQC Sept. 27, 2017). The Council determined that Brook's application lacked "proper testing and analysis to determine the risk of subsidence due to mining activities." *Id.* at 16. The Council supported this general finding by identifying specific omissions in Brook's subsidence control plan, including the lack of any "site-specific assessment of the strength and stability of the roof, floor, and pillar materials at the permit area." *Id.* The Council did not accept Brook's vague commitment "to do the necessary engineering work ... as part of the ground control plan." *Id.* at 17.

The Council's 2017 findings describe a subsidence control plan that differs greatly from the current version. For example, Brook's 2017 subsidence control plan included a mere seven pages of text. *Brook Mine Permit Application, Vol. XI* (DEQ Ex. 12 at 321-27).² Brook's initial plan included some conservative subsidence control measures, such

¹ The remaining issues in this appeal, involving roads and facilities, coal production, and the identification of a mine operator, have been thoroughly briefed by the parties. To avoid duplication, the Department will not address these issues further in this brief.

² Available on the Council's website at <https://eqc.wyo.gov/Public/ViewPublicDocument.aspx?DocumentId=13978>.

as limiting tunnel widths to 11.5 feet and designing pillars at a 1:1 width-to-height ratio. *Id.* However, Brook's initial plan was not certified by a professional engineer, failed to address the sub-bituminous nature of the coal seam, and, most importantly, included no analysis of subsurface conditions within the permit area. *In re Brook Mine Application*, slip op. 16-17.

Brook responded to the Council's 2017 findings by retaining Agapito Associates, Inc., a professional engineering firm, to provide specific design recommendations, supported by geotechnical testing and analysis in the TR-1 highwall mining area. (DEQ Ex. 5 at 368, 385-89). Agapito analyzed roof, floor, and pillar strength by conducting twenty uniaxial compression tests, two axial point load tests, nine diametral point load tests, and five slake durability tests on a TR-1 core sample. (*Id.* at 379). Agapito used its data from the TR-1 mining area to establish a minimum 1.6 stability factor for underground pillars and a thirty-nine percent coal extraction ratio. (DEQ Ex. 5 at 410-13). Although the Department ultimately found Agapito's work insufficient to characterize TR-1 and other highwall mining areas, the Department developed Conditions 9 and 10 as an extension of Agapito's testing and analysis. (*See* DEQ Ex. 9 at 4-5) (requiring a greater number of core samples and additional types of testing, but otherwise leaving Agapito's subsidence evaluation methods in place). Agapito established an important framework for evaluating subsidence potential at the Brook Mine. The Department, through Conditions 9 and 10, made Agapito's methods even more comprehensive and ensured that Brook would apply them consistently throughout all future highwall mining areas.

The Council characterized Brook's 2017 subsidence control plan as "deficient," meaning that it was so lacking in detail that it could not be corrected through permit conditions. *In re Brook Mine Application*, slip op. 28; Wyo. Stat. Ann. § 35-11-103(e)(xxiv) (defining "deficiency" as "an omission or lack of sufficient information serious enough to preclude correction or compliance by stipulation in the approved permit"). But this deficiency determination has no bearing on Brook's current application. In 2017, the Council rejected a subsidence control plan that included no on-site testing and analysis. Despite the Resource Council's assertions, this is not the same as requiring an application to include up-front testing and analysis for all permitted mining areas. The Council did not say that it needed **all** future testing and analysis; instead, it needed some.

Brook's initial subsidence control plan did not even include the basic building blocks for a testing and analysis program. By comparison, Brook's current subsidence control plan, which includes the Condition 9 and 10 requirements, involves extensive geotechnical testing and analysis to evaluate subsidence potential in future highwall mining panels. Under Conditions 9 and 10, Brook must follow strict procedures and receive the Department's approval before conducting any future highwall mining. The Department developed these permit conditions in accordance with its normal procedures and in strict compliance with Chapter 7, Section 2 of the Land Quality-Coal Rules, which allows operators to submit detailed subsidence control information on "a schedule approved by the Administrator." *Rules Wyo. Dep't of Env'tl. Quality, Land Quality-Coal*, ch. 7, § 2(c). Because Brook's current subsidence control measures are nothing like their 2017 predecessors, the Council must afford them new and independent consideration.

CONCLUSION

In this appeal, the Council must determine whether Brook's highwall mining will be "planned and conducted so as to prevent subsidence from causing material damage to structures, the land surface, and groundwater resources." *Rules Wyo. Dep't of Env'tl. Quality, Land Quality-Coal*, ch. 7, § 2(b)(iii). Brook's subsidence control measures achieve this standard. The Resource Council has offered no evidence showing that, with these measures in place, subsidence will cause material damage at the Brook Mine. For these reasons, the Council should grant summary judgment to Brook and the Department.

Dated this 1st day of December, 2020.



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CERTIFICATE OF SERVICE

I hereby certify that I served a true and correct copy of the foregoing *Reply* upon the persons listed below, this 1st day of December, 2020, addressed as follows:

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