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February 17, 2016

Re: Strata Energy's December 23, 2105 Request To Amend  
Source Materials License SUA-1601

It has recently come to our attention that Strata Energy, Inc. (Strata or SEI) has submitted a request to amend its source materials license for the Ross in-situ leach uranium mining project (Ross Project) in Crook County, Wyoming. *See* Strata Dec. 23, 2015 Letter (Strata Letter) (MLA ML16020A370).<sup>1</sup> We are writing on behalf of the Intervenors in the Ross license proceeding – the Natural Resources Defense Council and Powder River Basin Resource Council – to strenuously object to the license amendment request. As explained below, the requested amendment would (a) run directly contrary to the Atomic Safety and Licensing Board's (ASLB or Board) January 23, 2015 ruling on the Ross Project; (b) fundamentally undermine the rationale the Board provided in upholding the Supplemental Environmental Impact Statement (SEIS) conducted for the Project; and (c) vastly increase the risks the Ross Project poses to groundwater quality beyond the boundaries of the exempted aquifer. We urge you to deny the Amendment, or, at bare minimum, refer the matter to the ASLB, which is the only forum where a modification of the Board's ruling – which is what Strata seeks – could be appropriately considered.

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<sup>1</sup>

Available at <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML16020A370>



## Background

In April, 2014, the Commission issued the Strata Materials License for the Ross Project.<sup>2</sup> License Condition 10.12 provided that:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and abandon all historic drill holes located within the perimeter well ring for the Wellfield. The licensee will document such efforts to identify and properly abandon all drill holes in the wellfield data package. The obvious import of this provision, as originally crafted by the Commission itself, was to insure that Strata makes a meaningful effort to locate and properly fill/abandon drill holes *before* it begins drilling and testing for its wellfield data package.

In challenging the environmental review conducted for the Ross Project, Intervenors raised serious concerns with the limitations of this license condition. As pertinent here, those concerns centered on the adequacy of limiting the requirement to fill old boreholes to the perimeter well ring, or whether, instead, Strata should be required to find and fill boreholes beyond that ring. In particular, Intervenors were concerned that when contamination inevitably moves beyond the well ring during excursions, the existence of unfilled boreholes beyond the well ring would become a source of contaminant migration beyond the purported confined aquifer.

NRC Staff responded to these concerns by claiming it was unnecessary to fill those holes because any excursions would be detected and recovered before they move beyond the well ring, and therefore would not reach these boreholes. For its part, Strata argued that the depth of the holes, the fact that they have self-sealed over time, and differences between the piezometric heads in the aquifers all make it unnecessary to do more than License Condition 10.12 requires.

The Board rejected Staff and Strata's arguments, finding the existing license condition on filling boreholes inadequate. Characterizing the hundreds of unfilled boreholes as a "daunting challenge," the Board found that Staff had "overly discounted the importance of the license condition requirement that SEI act to locate and properly abandon all historic drill holes . . . ." ASLB Opinion (LBP-15-3) (Jan. 23, 2015) at 4.127. The Board relied particularly on the fact that Strata and Staff attributed prior pumping test results to unplugged boreholes, finding that this showed the "possibility for the downward movement of fluids from the OZ into the DM aquifer." *Id.* at 4.129.

To address this concern, the Board strengthened License Condition 10.12, requiring Strata to endeavor to locate and fill additional boreholes located downgradient of each wellfield and between the perimeter well ring and the aquifer exemption boundary. Thus, as amended, License Condition 10.12 reads:

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<sup>2</sup> Available at <file:///C:/FIRM%20DOCUMENTS/HOWARD/NRDC/Strata/2016/FINAL%20LICENSE.pdf>

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and abandon all historic drill holes within:

- A) The perimeter well ring for the Wellfield; and
- B) To the extent the historic drill holes extend into the first underlying aquifer, the area that is downgradient of the Wellfield and is between the perimeter well ring for the Wellfield and the closer of either
  - i. The Ross Project license area boundaries shown in figure 1.4-2 of the approved license application; or
  - ii. The outer boundary of the exempted aquifer as defined by the Class III UIC permit issued by the Wyoming Department of Environmental Quality.<sup>3</sup>

The licensee will document such efforts to identify and properly abandon all drill holes in the wellfield data package.

Moreover, addressing Intervenors' concern that these boreholes may not be filled in a timely manner, the Board explained that this license condition requires that the process be completed "before SEI conducts the tests for a wellfield data package that SEI must finish prior to beginning facility operation," recognizing that filling boreholes only after the contamination has occurred will be too little, too late. ASLB Op. at 4.128 n.65.<sup>4</sup>

On December 23, 2015 Strata requested that the Commission further amend License Condition 10.12. The Amended provision would read:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and abandon all historic drill holes within the perimeter well ring for the Wellfield. In addition, to the extent the historic drill holes extend into the first underlying aquifer, the licensee will attempt to locate and abandon all historic drill holes within an area that is downgradient of the Wellfield and is between the perimeter well ring for the Wellfield and the anticipated point of exposure for a future ACL application pursuant to 10 CFR Part 40, Appendix A, Criterion 5B(5)(C) either

- i. Prior to the start of operations of the Wellfield proposed in the wellfield data package; or

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<sup>3</sup> Although the revised License Condition refers to the Ross Project boundary, since the boundary of the exempted aquifer is always closer to the well ring than the project boundary, only the exempt aquifer boundary is relevant to the locations where boreholes must be filled.

<sup>4</sup> Joint Intervenors have appealed aspects of the Board's decision to the Commission, and the matter remains pending. On the other hand, neither Staff nor SEI elected to appeal this portion of the Boards' decision – which, as explained below, may not be collaterally attacked through the guise of a "License Amendment."

- ii. Prior to the submittal of an ACL application. If the drill holes are abandoned after the start of operations of a wellfield, then the licensee will be required to attempt to verify the location of such drill holes prior to the start of operations of that wellfield and provide the cost to cover the eventual abandonment of the drill holes in its financial assurance estimate.

The licensee will document such efforts to identify and properly abandon all drill holes in the wellfield data package.

Under the plain terms of this proposed Amendment, SEI will be permitted to fill *fewer* boreholes, and will be permitted to wait until long after the project is complete – when it is submitting its post-project remediation plan – to fill boreholes beyond the monitoring well ring.

### **Discussion**

#### **A. The Office of Nuclear Material Safety And Standards Has No Authority To Consider The Requested License Amendment.**

If SEI was dissatisfied with the Board’s amendment of License Condition 10.12, it could – and should – have availed itself of its right to petition for Commission review under 10 C.F.R. § 2.341. Through that procedure it could have asked the Commission to reject the Board’s amended License Condition, which would have obviated the need for the Amendment Strata now seeks.<sup>5</sup>

Rather than avail itself of that opportunity to challenge the Board’s amendment, however, SEI opposed Intervenors’ Petition for Review to the Commission by *defending the Board’s amendment of License Condition 10.12*. Thus, in urging the Commission to reject Intervenors’ arguments that the project poses serious environmental risks, SEI stressed that, as regards the filling of abandoned boreholes, the Board “has modified this license requirement to *include identified historic boreholes outside such perimeter monitor well network*.” SEI Opp. To Pet. For Review at 16 (Mar. 16, 2015) (emphasis added).

Similarly, as to timing, in responding to Intervenors’ argument that License Condition 10.12 does not require that all the boreholes be filled prior to operations, Strata relied on the Board’s conclusion that “the timetable for carrying out its provisions is clear” *id.* at 17 n.17 – *i.e.*, that “the schedule for completing this endeavor [is that] it must be done *before SEI conducts the tests for a wellfield data package that SEI must finish prior to beginning facility operation*.” ASLB Op. at 94 n.65 (emphasis added).

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<sup>5</sup> Since the original license condition had no requirements for addressing boreholes beyond the monitoring well ring, it would not have been necessary to amend the requirements for those boreholes had the original license condition been re-imposed in the adjudicatory process.

Against this background, there is simply no procedural or practical basis for the Material Safety Office to consider SEI's proposed license amendment, which would reduce the number of boreholes the Board found must be filled, and would permit filling of boreholes to be completed long after the Board determined they must be filled in order to protect against contaminant migration. SEI cannot be permitted to rely on the Board's Amended License Condition in defending the Board's decision to the Commission, while at the same time seeking to seriously weaken that condition. *See, e.g., New Hampshire v. Maine*, 532 U.S. 742 (2001) (applying judicial estoppel to bar party from taking a position contrary to its prior argument). Rather, any such amendment may only be presented in the adjudicatory process.

### **B. The Proposed License Amendment Runs Contrary To The Board's Rationale In Upholding The Environmental Review For The Project.**

Even assuming *arguendo* that the Office of Material Safety And Standards had the authority to amend the License Condition imposed by the ASLB, doing so would fatally undermine the rationale for the Board's decision upholding the environmental review conducted for the Ross Project. As noted, the Board acknowledged Intervenors' concern that unfilled boreholes pose concrete risks of contaminant migration and concluded that the original license condition – which did not require filling any boreholes beyond the monitoring well ring – was insufficient to insure that the environmental impacts would remain as small as characterized in the SEIS. The Board purported to resolve that concern by both requiring certain additional boreholes be plugged, and by making clear this would occur *before* the drilling and operations that are going to inevitably release contamination into the groundwater.

SEI's proposed amendment would undo both of these fundamental premises of the Board's conclusion that the SEIS accurately characterized the environmental impacts of the project:

1. SEI's proposed amendment as to *which* boreholes must be filled is confusing at best – relying on an “anticipated point of exposure for a future ACL application” as the outer limit on the location of boreholes that must be located and filled. What is clear from the accompanying discussion, however, is that this location will be *well short* of the aquifer exemption boundary the Board delineated as the outer limit for borehole location and filling. Indeed, as SEI explains, the amendment is necessary because the NRC Staff maintains that the Board's Amended License Condition 10.12 requires locating and filling many more boreholes than SEI believes necessary. SEI Dec. 23, 2015 Letter at 2. Thus, while it is not at all clear precisely which location(s) SEI will choose as the “anticipated point of exposure for a future ACL application,” there can be no doubt that those locations will be *well short of those under the Board's Amended License 10.12*. Since this, in turn, means that, were the new amendment granted, more boreholes will remain unlocated and unfilled, it follows that the amendment will pose the very kinds of additional environmental risks that led the Board to amend License Condition 10.12 in the first place. Put another way, under the Board's ruling the SEIS cannot support the license amendment SEI seeks.

2. License Condition 10.12, as originally written *and* as amended by the Board, provides that boreholes will be located and filled “[p]rior to conducting tests for a wellfield data package.” As the Board explained, this language means that the boreholes must be located and filled “*before* SEI conducts the tests for a wellfield data package that SEI must finish prior to beginning facility operation.” ASLB Op. at 4.128 n.65 (emphasis added).

Recognizing how important it is that these holes be filled in a timely manner, when the Board expanded the scope of which boreholes are included beyond the monitoring well ring, it required that the additional boreholes *also* be located and filled during *the same relatively early time period*.

SEI’s proposed license amendment fundamentally undermines this requirement, permitting SEI to delay filling the boreholes beyond the monitoring well ring until long after the entire operation has taken place, so long as it is “[p]rior to the submittal of an ACL application.” Thus, under SEI’s approach, during the ISL mining process – when contaminants will be deliberately released into the groundwater to extract uranium – none of the boreholes beyond the monitoring well ring need to be properly abandoned.

The premise of the Board’s requirement that boreholes be located and filled beyond the monitoring well ring was that doing so would help insure that, during operations or relatively shortly thereafter, there was no pathway for contamination to move beyond the confined aquifer. Certainly, properly abandoning these boreholes only long *after* these operations are completed completely undermines the purpose of this requirement, since, under SEI’s approach, the boreholes may be filled long after they have allowed contamination to escape into the broader environment. Accordingly, this approach also cannot be reconciled with the Board’s conclusion upholding the SEIS.<sup>6</sup>

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<sup>6</sup> SEI’s proposed amendment also refers to plugging boreholes “[p]rior to *the start of operations* of the Wellfield proposed in the wellfield data package.” It is not clear why this deadline would be relevant given the alternative later deadline also included, but it bears noting that even this relatively earlier deadline would be long after the deadline imposed in License Condition 10.12 and by the Board, which, again, requires these efforts be completed “[p]rior to *conducting tests for a wellfield data package*.”

The added “condition” that, if Strata elects to wait until after operations have commenced, it will still “attempt to verify the location of such drill holes” and provide sufficient funds to fill them later as part of “its financial assurance estimate” is also useless, since, again, simply insuring that they *will* be filled eventually does nothing to prevent them from becoming a source of contaminant migration during the ISL mining process.

**C. The Proposed License Amendment Would Pose Serious Risks To The Environment.**

Finally, as the foregoing amply demonstrates, SEI's proposed amendment to License Condition 10.12 should be rejected because it poses substantial risks to the environment. As the Board recognized, unfilled boreholes have been found time and again to be a source of contaminant migration in ISL mining, including at the Ross site. Indeed, as recently as November 2015 SEI relied on an unfilled borehole to explain test results. *See* Nov. 17, 2015 Tech. Eval. Report at 4.<sup>7</sup>

It was in recognition of this concern that the Board strengthened License Condition 10.12 by requiring *timely* location and abandonment of drill holes beyond the monitoring network, so long as they were within the confined aquifer. SEI's proposed amendment, by contrast, fundamentally undermines that additional requirement, limiting the scope of the boreholes that must be found and, even as to those, allowing them to be properly abandoned only long after they have served to allow the very contaminant migration the Board sought to protect against.

Accordingly, even if you were to conclude you have the authority to grant the requested Amendment, and that you may do so regardless of the Board's ruling, Intervenors urge you to reject the Amendment in order to protect the groundwater and environment which are at risk from this project, resources which would be at *increased risk* should SEI be permitted to save money by ignoring unfilled boreholes that will permit the very environmental pollutants SEI has obtained authority to introduce into the groundwater to migrate beyond the confined aquifer and pollute Wyoming waters.

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For all the foregoing reasons we respectfully urge you to reject the License Amendment request. Please let us know if there is any further information we can provide.

Sincerely,



Howard M. Crystal  
Geoff H. Fettus  
Shannon Anderson

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<sup>7</sup> Available at <http://pbadupws.nrc.gov/docs/ML1532/ML15324A441.pdf>