

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION**

In the Matter of:)
)
) Docket No.: 40-9075-MLA
POWERTECH (USA), INC.)
) Date: July 2, 2015
(Dewey-Burdock In Situ Uranium Recovery)
Facility))
)
_____)

**REPLY TO NRC STAFF’S RESPONSE TO POWERTECH (USA), INC.’S PETITION
FOR REVIEW OF LBP-15-16**

I. INTRODUCTION

Powertech (USA), Inc. (Powertech) hereby submits this Reply to the United States Nuclear Regulatory Commission (NRC) Staff’s Response¹ to its Petition for Review of LBP-15-16². For purposes of this Reply, Powertech hereby incorporates Sections I-III of its Petition for Review by reference. For the reasons discussed below, Powertech respectfully requests that the Commission remove the license condition imposed by the Atomic Safety and Licensing Board (Licensing Board) under Contention 3 and concur with Powertech’s license application commitments as required by NRC License No. SUA-1600, License Condition 9.2.

II. ARGUMENT

Initially, NRC Staff addresses Powertech’s Petition for Review by intimating that Consolidated Intervenor (CI) and the Oglala Sioux Tribe’s (Tribe) “arguments could reasonably be construed as claiming that...Powertech must properly abandon all boreholes within the perimeter of each wellfield.” NRC Staff Response at 7, fn. 16. While Powertech generally agrees with the maxim that “all” boreholes within a wellfield should be confirmed to be properly plugged or otherwise

¹ NRC Staff’s Response to Powertech’s Petition for Review of LBP-15-16 (ML15173A487) (June 22, 2015).

² Brief of Powertech (USA), Inc. Petition for Review of LBP-15-16 (ML15146A493) (May 26, 2015).

mitigated prior to conducting licensed ISR operations, it is critical that the Commission understand the distinction between Powertech's existing commitments and what is implicated under the newly imposed license condition.

Under the new license condition, the issue at stake here is whether Powertech must “re-enter” and “re-abandon” all historical boreholes, including those that were already properly plugged, or whether it merely requires “confirmation”³ that none poses a pathway for migration of recovery solutions. Powertech's existing license commitments, as captured by License Condition 9.2, require Powertech to attempt to locate with best professional practices (including aquifer pump testing) any presently unknown boreholes and to plug and abandon or otherwise mitigate all boreholes that have the potential for adversely affecting the control of recovery solutions within a wellfield. *See* Powertech Exhibit APP-016-B at PDF page 55 (detailing Powertech's existing commitments); *see also* SUA-1600, License Condition 9.2 (enforcing Powertech's commitments in its approved license application and supplements). Contrary to NRC Staff's assertion, while the language of Contention 3 is broad, these existing commitments were never specifically challenged in the hearing, either in pre-filed statement or testimony, at the evidentiary hearing or in post-hearing pleadings or testimony. As stated previously by Powertech, a Licensing Board has the power to raise *sua sponte* any significant environmental or safety issue in operating license hearings, although this power should be used sparingly in operating license cases. *See* 10 C.F.R. § 2.340(a); *see also Consolidated Edison Co. of N.Y.*, (Indian Point Nuclear Generating Units 1, 2 & 3), ALAB-319, 3 NRC 188, 190 (1976). As noted previously, this power is typically limited to serious safety issues that would force a reasonable mind to inquire further. *See Wis. Elec. Power Co.*, (Point Beach Nuclear Plant, Units 1 & 2), LBP-82-24A, 15 NRC 661, 664 (1982). Given that neither CI nor the Tribe raised the issue of “re-entering” and “re-abandoning” properly plugged and abandoned historical boreholes and the

³ The language of the newly imposed license condition is vague enough that it is difficult to construe whether or not Powertech can merely confirm that historical borehole were indeed properly plugged, which is typically done during pre-operational wellfield development.

Licensing Board did not inquire as to the merit of such an action, Powertech asserts the issue was not properly before the Licensing Board during this proceeding.

Further, in the *Strata Energy, Inc.* proceeding, from which the Licensing Board copied the additional license condition, the issue of how the licensee would go about locating and plugging all existing boreholes before conducting licensed operations was addressed at length during the evidentiary hearing. *See, e.g., Strata Energy, Inc.* (Ross ISR Uranium Project), LBP-15-3 (January 23, 2015) at 88. But, in Powertech's case, evidence was offered showing that virtually all historical boreholes *were plugged and abandoned properly in accordance with State standards.* *See* Powertech Exhibit APP-045 at 166-168.⁴ Thus, where there is documented evidence that historical boreholes were properly plugged and abandoned and where Powertech has committed to testing for the presence of unplugged boreholes through pump testing and other methods⁵ prior to operations, it makes no sense to order Powertech to "re-enter" and "re-abandon" all historical boreholes.⁶

The issue of "re-entering" and "re-abandoning" properly plugged and abandoned boreholes under this new license condition is further raised by NRC Staff in its Response by stating the condition could require plugging and abandonment of *all* historical boreholes and not just those that could cause the potential for migration of recovery solutions from a wellfield. NRC Staff Response at 7. Powertech agrees with NRC Staff that this license condition is a departure from Powertech's existing license commitments in that it would require "re-entering" and "re-abandonment" of

⁴ The Safety Evaluation Report (SER), which was not challenged by Intervenors, determined that the State of South Dakota well plugging and abandonment procedures are adequate under NRC regulations. *See* NRC Staff Exhibit NRC-134 at PDF page 214. Thus, it is illogical to require a licensee to "re-enter" and "re-abandon" wells that were sufficiently plugged and abandoned. Since the Commission presumes that a licensee will not violate its license requirements, it is in accord with NRC regulations to require "confirmation" of proper plugging and abandonment of historical boreholes by the licensee.

⁵ Another commitment that Powertech made that was not recognized by the Licensing Board or the NRC Staff will require Powertech to measure water levels in every well in the monitoring system constructed for each wellfield and use these measurements to construct potentiometric surface maps that will be evaluated for anomalous conditions indicative of leaking boreholes. *See* Powertech Exhibit APP-016-D at PDF Page 283.

⁶ It is important to note that under the newly imposed license condition, historical borehole abandonment would have to occur *prior* to pump testing; this may be interpreted to indicate that pump testing, which is the primary means of identifying leaking boreholes, could not actually be used for that purpose.

properly plugged and abandoned historical boreholes. The Licensing Board’s new license condition, if interpreted to require this, would be inconsistent with standard industry practices for wellfield development, which involve identifying leaking boreholes using aquifer pump tests and other methods, fixing any such leaking boreholes that cause communication with overlying or underlying aquifers, and confirming that the problem has been solved by re-running such tests. This standard practice has been used for several previously approved ISR licenses⁷ and was described at length at the evidentiary hearing. *See* August 19-21, 2014, Evidentiary Hearing Transcript at 1028-1029 & 1051-1052. Since no inquiry was made by the Licensing Board, CI or the Tribe on this issue, this departure from Powertech’s already approved license commitments should not be upheld.

NRC Staff also states that “the license condition is potentially more protective of public health and safety than Powertech’s existing commitments” since Powertech’s existing commitments “do not expressly require that Powertech conduct confirmatory tests.” NRC Staff Response at 8. This statement is somewhat misleading, because Powertech has committed during wellfield package development to verify “hydraulic isolation between the production zone and overlying and underlying units.” *See* Powertech Exhibit APP-016-D at PDF page 284. By standard industry practice, this performance-based requirement could not be satisfied without confirmatory testing if a leaking borehole was identified. Given that this action was already understood by it to be part of wellfield development, Powertech does not object to this requirement being made an explicit part of its license if initial testing identifies a leaking borehole or well. Based on these existing, standard wellfield development practices, imposition of a requirement to “re-enter” and “re-abandon” properly plugged and abandoned historical boreholes or to require plugging and abandoning of boreholes or wells that do not pose a risk of recovery solution migration does nothing more than result in additional time and cost that have not been deemed appropriate for other approved ISR licenses.

⁷ *See, e.g.,* Nichols Ranch ISR Project SER, License SUA-1597, July 2011 (ML102240206) at 27, describing NRC Staff’s determination that the licensee’s proposal to “reenter, plug, and abandon *any improperly plugged boreholes it discovers by pumping tests or other methods*” is acceptable.

Additionally, this new requirement also could potentially result in an increase in potential health and safety risks. The process of re-drilling already plugged boreholes potentially could create additional pathways for recovery solution migration, because proper plugging is designed to seal off fluid migration post-abandonment and disturbance of such sealants could result in the opening of pathways for fluid migration. Where historical boreholes have been properly plugged and no significant safety risk has been identified (i.e., it has been documented through pump testing and other methods that the production zone is adequately isolated from overlying and underlying units to safely conduct ISR), it is inconceivable that a newly imposed license condition that could create increased potential risk of recovery solution migration should be upheld.

Lastly, Powertech agrees with NRC Staff's statement that "the license condition should track the relevant language in Powertech's application as closely as possible." NRC Staff Brief at 8. It is typical practice in NRC Staff license decisions that the license is the primary controlling vehicle for a licensee and not documents in the ROD. However, in this case, License Condition 9.2 specifically requires that Powertech follow each of its commitment in its license application and supplemental documents including responses to requests for additional information (RAI). Thus, Powertech respectfully requests that the Commission remove the Licensing Board's newly imposed license condition and direct Powertech to adhere to its license commitments on historical borehole plugging and abandonment, as reflected in License Condition 9.2.

Respectfully Submitted,

**/Executed (electronically) by and in accord
with 10 C.F.R. § 2.304(d)/
Christopher S. Pugsley, Esq.**

Anthony J. Thompson, Esq.
Christopher S. Pugsley, Esq.
Thompson & Pugsley, PLLC
1225 19th Street, NW
Suite 300
Washington, DC 20036
COUNSEL TO POWERTECH

Dated: July 2, 2015

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **“POWERTECH (USA), INC.’S REPLY TO NRC STAFF’S RESPONSE TO POWERTECH (USA), INC.’S PETITION FOR REVIEW OF LBP-15-16”** in the above captioned proceeding have been served via the Electronic Information Exchange (EIE) this 2nd day of July 2015, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the above captioned proceeding.

Respectfully Submitted,

**/Executed (electronically) by and in accord
with 10 C.F.R. § 2.304(d)/
Christopher S. Pugsley, Esq.**

Anthony J. Thompson, Esq.
Christopher S. Pugsley, Esq.
Thompson & Pugsley, PLLC
1225 19th Street, NW
Suite 300
Washington, DC 20036
COUNSEL TO POWERTECH

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