



State of Utah

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DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Douglas J. Hansen
Director

September 11, 2023

Vern C. Rogers, Director of Regulatory Affairs
EnergySolutions, LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111

RE: Federal Cell Facility Application Request for Information

Dear Mr. Rogers:

The Division of Waste Management and Radiation Control (Division) hereby provides Requests for Information (RFI) regarding the Federal Cell Facility Application dated August 4, 2022. Each individual paragraph in the attached document is numbered and represents an issue discovered in a review of the application. When responding to an RFI, please use the assigned number representing the question. The Division will track all responses and provide regular updated information to the public and reviewers.

The current review does not represent a comprehensive evaluation of the Application's merit and additional RFI's will follow where appropriate.

If you have any questions regarding this letter, please call Otis Willoughby at 385-622-2213.

Sincerely,

Douglas J. Hansen, Director
Division of Waste Management and Radiation Control

DJH/OHW/jk

Enclosure: Federal Cell Application Review – Requests for Information or Updates to the Application (RFI)

c: Jeff Coombs, EHS, Health Officer, Tooele County Health Department
Bryan Slade, Environmental Health Director, Tooele County Health Department
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Federal Cell Application Review

Request for Information or Updates to the Application (RFI)

General

- Each RFI has been assigned an identifier with a numbering convention as follows:
 - Application/Appendix Section
 - Section/Appendix Subsection
 - Section/Appendix Subsection (when applicable)
 - Sequential numbering

Example: A question in Section 1, subsection 1, subsubsection 1 – The first RFI#1 would be 1.1.1-1., the next question in that section/subsection would be numbered 1.1.1-2

Please refer to the assigned RFI number when submitting a response.

Appendix M: Geosyntec Federal Cell Engineering Evaluation

- **M-1**

Localized groundwater mounding exists along the southern boundary of the Federal Cell Facility (FCF). The groundwater mound will influence pore water pressures and the outcomes of the geotechnical analyses. This may affect the inferences drawn regarding stability. Evaluate the possible impacts this information may have on the geotechnical analyses presented in the geotechnical design report, including stability and settlement. Revise the geotechnical design report to incorporate the groundwater mound, with revised analyses as appropriate.

- **M-2**

Additional detailed information is needed to provide independent confirmation of the outcomes that were reported for the short-term with existing groundwater, long-term with existing groundwater, and long-term with a groundwater rise. Please provide the detailed input and output from the Slope/W analysis for each scenario that was analyzed, including all information necessary to reproduce the analyses. This information should include the control parameters for the random searches for each scenario and a graphical depiction indicating how the search was controlled at the upper portions and top of the embankment.

- **M-3**

Ambiguity exists whether the groundwater elevations used in the stability analysis are consistent with the groundwater levels on site. This could affect the outcome of the stability analysis. Please demonstrate that the groundwater levels used in the stability analyses are consistent with the observed groundwater levels at the site.

- **M-4**

The stability analysis should depict the geometry and location of the currently proposed conditions to be representative of what must be evaluated for the license application. Please revise the slope stability analyses to depict the embankment above the waste layer consistent with the geometry currently being proposed.

- **M-5**

The peak ground acceleration (PGA) used in the seismic analysis for the FCF should be consistent with past analyses at the site, or a rigorous explanation should be provided why a lower PGA is appropriate for the FCF. Past seismic analyses of the Class A West cell conducted in 2011 used a PGA of 0.28g based on an extensive review of information associated with the site. The current analysis for the FCF uses a lower PGA = 0.24g. Please justify why this lower PGA is appropriate using a probabilistic seismic hazard analysis similar to that done in 2011. If unable to justify, please revise all geotechnical calculations for the FCF using a PGA = 0.28g.

- **M-6**

The analysis should employ appropriate blow count corrections based on sound documentation. The liquefaction analysis has employed corrected blow counts under the assumption that a modern automatic hammer was used during drilling. The drilling logs for GW-36, GW-37, and GW-38 were conducted in 1996, and these logs do not indicate that a modern automatic hammer was used for drilling. Additionally, anecdotal reports suggest that the drilling rig employed in 1996 was equipped with a rope and cathead assembly. Please provide documentation demonstrating that the appropriate corrections have been applied to the blow counts used in all analyses. If unable to justify, please revise the blow counts and the analysis to reflect appropriate corrections.

- **M-7**

The depth of analysis appears too shallow and inconsistent with typical practice. The liquefaction analyses were terminated at a depth of 17 to 18 feet below ground surface and above the groundwater table, whereas liquefaction potential is typically assessed to depths on the order of 50 ft. Additionally, the sandy material in Unit 3 extends below this depth and into groundwater and could potentially liquefy. Provide justification why the shallow evaluation that was employed is appropriate, with suitable documentation justifying the shallow depths. If unable to justify, please conduct the analyses to greater depths as determined to be appropriate.