

Summary of Workshop to Solicit Comments, and Responses to Comments Received, Regarding Proposed Regulation LCB File No. R093-25 and Executive Order 2026-003

Date:	Monday, September 28, 2026
Time:	10:30 AM
Location:	Nevada State Capitol Building, Guinn Room, 101 North Carson Street, Carson City, NV 89701, and virtually via Microsoft Teams and telephone

Workshop Notice and Comment Period

The Nevada Division of Minerals (Division) held this workshop pursuant to NRS 233B.061 to solicit comments from interested persons on proposed changes to Chapter 534A of the Nevada Administrative Code (NAC) relating to the permitting, drilling, and operation of geothermal wells, including the stimulation of geothermal wells and Executive Order 2026-003. The workshop was conducted in accordance with the Nevada Open Meeting Law, NRS Chapter 241.

The notice of workshop was posted on September 4, 2026, on the Division website (<https://minerals.nv.gov/>) and the Nevada Public Notice website (<https://notice.nv.gov/>), and at the following locations: the Division of Minerals, 400 W. King St., Suite 106, Carson City; the Nevada State Legislature, 401 S. Carson St., Carson City; the Grant Sawyer Building, 555 E. Washington Ave., Las Vegas; and the Nevada State Library and Archives, 100 N. Stewart St., Carson City. The notice, the proposed regulation, and the Small Business Impact Determination were made available on the Division website.

The workshop addressed the revised proposed regulation, LCB File No. R093-25 (RP1). On Friday, September 25, 2026, the Division also posted the second revised proposed regulation (R093-25 RP2), which is the Legislative Counsel Bureau's version of the Division's green-line edits. As stated at the workshop, RP2 contains grammatical edits only and has no substantive differences from RP1. The workshop also sought public comment in response to Executive Order 2026-003 relating to the chapters under the authority of the Commission on Mineral Resources (NAC 513, 517, 519A.510–519A.635, 522, 534A and 534B).

Written comments were accepted until 5:00 PM on September 30, 2026. Four written submissions were received. Comments received at the workshop and in writing, and the Division's responses, are included in this summary.

Copies of this summary may be obtained on the Division website at <https://minerals.nv.gov/> or by contacting Rebecca Tims, Nevada Division of Minerals, 400 W. King Street, Suite 106, Carson City, NV 89703, (775) 684-7043, rtims@minerals.nv.gov.

Attendees

Commission on Mineral Resources:

- Stephanie Hallinan
- Bob Potts
- Nigel Bain
- Arthur Henderson
- Josh Nordquist

Division of Minerals Staff:

- Robert Ghiglieri, Administrator
- Garrett Wake, Deputy Administrator
- Dustin Holcomb, Fluid Minerals Program Manager
- Rebecca Tims, Administrative Assistant IV

Public (in person and virtual):¹

Morgan Sollano	Katrina McLaughlin
Gracie Garrett	Keith Elliott
Erica Freese, Ormat	Mike Hauser, AlterG Resources
Sherman Gallegos	Mike Satre
Rusty TLS	Coby Nelson
Mark Hauenstein, UC Won	Jeremy Drew
Carson Thomas	Kerry Rohrmeier
Bill Ehni	Brandon Law
Jack Conness, Fervo Energy	Erik Olson
David Faulder	Willy Carlson
Amelia Letvin	Paul Conrad, Fervo Energy
Jaina Moan	Pam Harrington
Jay Guerrero	Alex Jensen

¹ None of the attendees identified themselves as being affiliated with a small business. Affiliations are shown where provided to the Division.

Attendance and participation (NRS 233B.066(1)(c)):

Category	Number
Members of the public who attended	26
Persons who provided oral comment at the workshop	3
Persons who submitted written comments to the Division	4

Workshop Summary**I. Call to Order**

Administrator Robert Ghiglieri called the workshop to order at 10:31 AM. He noted that the meeting was a workshop and that there would be no formal roll call.

II. Public Comment

Three persons provided public comment:

- **Erica Freese, Ormat:** Thanked the Division for inviting industry to participate in drafting the regulations and for continuing to request comment. Stated that Section 16(1)(a) requires a cement log to be submitted but does not clarify what makes a cement log acceptable or unacceptable, and requested parameters for an approvable log. Stated that Section 17(2) requires the operator to stop stimulation and notify the Division if any change in annular space pressure is observed; in practice, annular pressure changes

during stimulation due to temperature fluctuations and ballooning of the casing, and she requested more appropriate sideboards for stopping stimulation rather than any change.

- **Paul Conrad, Land Manager of Planning, Fervo Energy:** Stated that Fervo sees real progress since the last workshop, specifically the site-specific standard for protecting public welfare and structures, the project area, and induced seismicity mitigation protocols, and that Fervo considers these changes constructive responses to industry concerns. Noted that Fervo submitted a letter with recommendations. Highlighted the causal nexus for red and amber light alerts, recommending wording that requires a causal link between a detected seismic event and well stimulation or injection activities because Nevada is naturally seismic; the nuances of public disclosure; and the consultation timing for amber light alerts in Section 13(3)(b), which requires immediate consultation while red light alerts have a 24-hour window.
- **Mike Hauser, Director of Permitting and Regulatory, AlterG Resources:** Thanked the Division for its collaborative approach with industry and noted good progress since the first round. Stated that AlterG submitted written comments. Similar to Ormat, raised the annular space pressure change and notification trigger, suggesting it potentially be linked to a percentage of burst or shoe breakdown pressure, and requested clarification that only the first annulus behind the string being stimulated must be monitored and recorded.

The Division reminded participants that additional public comment would be taken during the review of the proposed regulations under Item III.

III. Review, Discussion, and Workshop of Proposed Regulations to NAC Chapter 534A (R093-25)

The Division clarified that the agenda referred to the regulation as R09-24RP1 and that the correct file number is R093-25. The Division explained that R093-25 RP2, posted the previous Friday, incorporates the Legislative Counsel Bureau's version of the Division's green-line edits and contains grammatical edits only, with no substantive differences from RP1.

The Division presented the intent and goals of the proposed regulation. NRS Chapter 534A authorizes the Commission on Mineral Resources to adopt regulations relating to geothermal resources, including requirements for the operation of geothermal wells. The proposed regulation addresses new geothermal technologies, principally stimulation and the associated aspects of stimulation for enhanced geothermal systems, with a focus on downhole well integrity, baseline data, induced seismicity monitoring, and reporting requirements. The proposal also includes streamlining efforts under Executive Order 2023-003 and updates geothermal permit fees to match the cost of operating the program.

The Division reviewed the rulemaking timeline: drafting began in June 2025; the first public workshop was held in August 2025; an adoption hearing was held in May 2026, at which the regulation was not adopted and significant public feedback was received; the Division and the Commission then revised the proposed regulation, resulting in R093-25 RP1 with green-line edits. A tentative adoption hearing is proposed for November 12, 2026, which would include any changes resulting from workshop comments that the Division and Commission determine meet the intent of the changes. The final step is review by the Legislative Commission, on a date to be determined.

The Division summarized the proposed changes by section, including: definitions and applicability (Sections 2–10); application requirements for wells to be stimulated (Section 11); water sampling (Section 12); the Induced Seismicity Monitoring Plan and traffic light system

(Section 13); geologic and seismic information, including a seismicity forecast model (Section 14); casing, pressure testing, and flow meter requirements (Section 15); stimulation of existing wells (Section 16); operator duties during stimulation, including pressure monitoring, with daily stimulation pressures reported in the daily reports under Section 35 and a final report within 90 days (Section 17); orders to reduce pressure or cease operation and the follow-up meeting and hearing process (Section 18); the revised definition of injection well and conforming changes (Sections 20, 27 and 31); geothermal domestic wells (Section 21); project area permit well locations and traces (Sections 22 and 23); certification of well locations by a licensed professional land surveyor (Section 24); fees (Sections 25–28 and 33); bonding for wells planned to be stimulated (Section 29); submission of drill cuttings within 90 days and an alternative cuttings and core plan (Section 30); invoicing an operator for plugging costs that exceed the bond (Section 32); well completion and plugging filings (Section 34); and hearings on orders issued under Section 18 (Sections 36 and 37).

The Division then opened the item for public comment. No additional comments were received.

IV. Stakeholder Meeting – Executive Order 2026-003

The Division presented an overview of Executive Order 2026-003 and the chapters under the authority of the Commission on Mineral Resources (NAC 513, 517, 519A.510–519A.635, 522, 534A and 534B). No comments were received during the meeting. The Division is accepting comments on this item through October 9, 2026. This item is separate from the R093-25 rulemaking and is not addressed further in this summary.

V. Public Comment

No public comment was received.

VI. Adjournment

The workshop adjourned at approximately 11:04 AM.

Comments Received and Division Responses

Written comments were accepted through 5:00 PM on September 30, 2026. Four written submissions were received. The comments received at the workshop and in writing, and the Division's responses, are summarized below.

AlterG Resources – written comments

Comment on Section 17-2:

Annulus monitoring and recording- We would request that only the first annulus behind the string being stimulated is required monitoring.

Response:

The Division added clarification language regarding what annulus is to be monitored.

Comment on Section 17-2:

Notification if any changes in annular space pressure is observed- We anticipate changes in pressure throughout the stimulation. What is the threshold to trigger shut down of the stimulation? Should define as unexpected pressure changes or a certain% of burst or shoe breakdown.

Response:

The Division added clarification language regarding anticipated pressure changes during stimulation.

Ormat (Erica Freese) – verbal comments**Verbal Comment:**

Ormat requested clarification language in Section 17-2 surrounding the anticipated pressure changes in the monitored annulus during stimulation.

Response:

The Division added clarification language regarding what annulus is to be monitored and anticipated pressure changes during stimulation.

Verbal Comment:

Ormat stated that Section 16(1)(a) requires a cement log to be submitted but does not clarify what makes a cement log acceptable or unacceptable, and requested parameters that make a cement log approvable or not approvable.

Response:

The requirement to submit a cement bond log, if run, predated this regulation change; however, the regulation did not specify bond log parameters. The Division anticipates working with operators on an individual basis to determine the information required, survey method, and other details. Bond log requirements may be added to the individual permit Conditions of Approval.

Fervo Energy (Jack Conness, letter dated September 21, 2026; verbal comments by Paul Conrad)**Comment:**

Fervo requests that red and amber light alerts be triggered only by seismic events directly attributable to stimulation or injection activities, rather than any event occurring within the area of review.

Response:

The regulation intentionally establishes red and amber light alerts based on historic and anticipated epicenter magnitude of seismic events in the area rather than requiring a preliminary causal determination. Real time attribution of the cause of a seismic event within the short operational windows will be difficult when safety decisions must be made. The alert system therefore functions as an initial protective measure triggered by reliable seismic data from reputable sources.

To ensure project-specific accuracy, the ISMP requires detailed geological, faulting, seismic history, well-depth, and fracture-propagation information, enabling the Division to evaluate whether seismic events are likely induced or natural. The red-light requirement to reduce pressures or halt operations provides necessary time to assess risk and confirm that stimulation does not pose additional hazards.

Comment:

Fervo seeks revisions to require that shutdown orders be based on objective, technically supported seismic evidence, and asks that red light alerts serve only as supporting evidence rather than an automatic trigger for an order.

Response:

Section 18(1) authorizes the Administrator to issue an order when there is evidence that stimulation activities may pose an immediate danger or cause significant damage, or when a red-light alert is received for a seismic event within the area of review. The Division agrees that any evidence supporting such an order must have evidence directly to stimulation activities and be objective, technical, and grounded in seismic data. Section 18(1) is written to ensure evidence is required. The ISMP requirements and traffic-light framework ensure that operators provide the detailed seismic and geologic information necessary for such evaluations.

With respect to the red-light trigger, the Division maintains that an automatic reduction in injection pressures or ceasing operational authority is necessary for public safety. This approach aligns with nationally recognized guidance, including the U.S. Department of Energy's Protocol for Addressing Induced Seismicity Associated with Enhanced Geothermal Systems, which recommends that red-light conditions result in immediate suspension of pumping. Using this established protocol also aligns the Division's practices with existing Bureau of Land Management guidance, reducing duplicative regulatory frameworks and ensuring consistency across state and federal geothermal oversight.

Comment:

Fervo requests clear, objective criteria for resuming operations and a defined dispute-resolution process if the operator and Division cannot reach agreement within a specified timeframe.

Response:

Determining whether operations may resume depends on a detailed review of the specific event, the operator's ISMP, and relevant geological and environmental conditions. Given the uniqueness of each project and seismic event, resumption criteria are most appropriately identified within the ISMP itself, which must reflect site-specific geology, anticipated seismicity ranges, monitoring systems, and operational parameters. This approach allows the Division to assess risk based on conditions presented at the project area rather than applying rigid thresholds that may not account for local variability.

Where agreement on resumption cannot be reached after the required meeting, the existing Commission hearing procedures under NAC 534A.590-690 and Sections 36–37 provide a dispute-resolution pathway.

Comment:

Fervo asks that the "immediate" consultation requirement for amber alerts exceeding the ISMP be replaced with a defined timeframe consistent with other notification provisions, such as 24 hours.

Response:

The Division has proposed the change from “immediate” to “within 24 hours”.

Comment:

Fervo questions the need for operator-level seismic data reporting given USGS’s existing public data and suggests allowing operators to rely on verified USGS information; alternatively, Fervo requests tying the reporting threshold to site-specific amber alert levels instead of a fixed magnitude.

Response:

The operator can host all seismic events within the project area regardless of the magnitude; however, the Division will require each operator at least provide a link to the USGS seismic website that host all magnitude 2.5 events and higher. If an operator’s seismic monitoring equipment records a seismic event 2.5 or higher that is not captured on the USGS website, the proponent must provide that on a publicly available website.

Comment:

Fervo requests clarification that operators may periodically update ISMP seismicity assumptions and technical parameters as new site data becomes available, on a regular revision schedule.

Response:

The proposed regulations already allow for ISMP updates if agreed upon between both the Division and the owner or operator of a geothermal well or field. The Division recommends that the owner or operator of a geothermal well or field proposes a schedule for revision of the ISMP when submitting the original ISMP for review and approval.

UC Won (Mark Hauenstein, P.E., email dated September 30, 2026)**Comment:**

The proposed two-mile AOR significantly expands pre-stimulation data requirements, including water-source locations, geology, faults, land ownership, and well information. The commenter notes the AOR can extend onto lands the applicant does not control and questions whether the regulations should require the entire AOR to fall within the applicant’s ownership or leasehold.

Response:

The Division acknowledges that the proposed regulations add a 2-mile Area of Review from the well and any lateral projections. This addition is necessary to evaluate potential seismic and hydrologic impacts associated with stimulation. Section 11 requires operators to identify all surface ownership within the AOR and other relevant environmental and geologic information, which reflects the Division’s responsibility to ensure thorough assessment even where the AOR overlaps lands beyond the operator’s ownership. The regulation does not require the AOR to fall entirely within the applicant’s holdings because stimulation-related impacts may extend outside operational boundaries, and comprehensive review is essential for public safety.

Comment:

UC Won suggests that the proposed groundwater monitoring program represents a major expansion of NDOM's traditional role. UC Won suggested potential overlap with NDEP's statutory responsibility to protect state waters and questions the absence of mandatory water-quality sampling at the time a geothermal well is completed. They recommend requiring a baseline sample collected at well completion to accurately characterize initial water conditions.

Response:

These proposed regulations do not supersede or alter any water monitoring requirements enforced by NDEP. The groundwater sampling framework in Section 12 is designed specifically to capture samples before and post stimulation conditions, which typically occur before an operator applies for or receives a UIC permit. If a geothermal well is already permitted by NDEP for injection, the sampling provisions in these regulations do not apply.

Additionally, the Division's inclusion of water sampling requirements does not expand its traditional role. Similar baseline sampling obligations exist under NAC 522 for oil and gas activities, which are also administered by the Division of Minerals. The proposed framework is therefore consistent with existing regulatory practice and does not duplicate or conflict with NDEP's statutory responsibilities.

Comment:

UC Won stated that Section 15's 1,500-psig, 30-minute pressure test does not specify the required testing medium (water vs. air). They recommend clarifying acceptable test methods due to differing safety risks between hydrostatic and pneumatic testing. They also point out inconsistencies between NDEP's typical 1,000-psig test standard and NDOM's proposed 1,500-psig requirement, suggesting both agencies may need to coordinate to ensure consistent regulatory expectations.

Response:

All wells must meet the proposed 1,500-psig, 30-minute pressure-test requirement, which is intended to verify well casing integrity before drilling and stimulation can continue. This standard aligns with the Bureau of Land Management's accepted practice, ensuring consistency between state and federal geothermal well permitting. NDEP's pressure testing requirements apply specifically to wells permitted for injection under its UIC program, whereas the Division's requirements apply to well construction and stimulation activities.

Zanskar (Samantha Hermany, email dated September 24, 2026)**Comment:**

Zanskar thanked the Division for the opportunity to review the latest draft, stated that its earlier comments were incorporated, and stated that it has no further questions, concerns, or feedback at this time.

Persons Who Provided Comment

The following information is provided as required by NRS 233B.066(1)(d), to the extent it was provided to the Division.

Name	Entity / organization	Type	Email	Business address / telephone
Erica Freese	Ormat	Oral	efreese@ormat.com	775-685-9277
Paul Conrad	Fervo Energy	Oral	Virtual	Virtual
Mike Hauser	AlterG Resources	Oral; written	Virtual	Virtual
Jack Conness	Fervo Energy	Written	Virtual	Virtual
Mark Hauenstein, P.E.	UC Won	Written	Virtual	Virtual
Samantha Hermany	Zanskar	Written	Virtual	Virtual

Robert Ghiglieri
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