CANNABIS COMPLIANCE BOARD
STATE OF NEVADA

PUBLIC COMMENT

SB157 Regulatory Workshop

March 3, 2026

February 27, 2026

Cannabis Compliance Board
700 Warm Springs Road, Suite 100
Las Vegas, NV 89119
Via email to: Regulations@ccb.nv.gov

Subject: Comments on Proposed Changes to NCCR 1, 10, 11 (SB 157)

Dear Cannabis Compliance Board Members and Director Humm,

On behalf of the Nevada Cannabis Association (NCA), we appreciate the opportunity to comment on the second draft of proposed amendments to NCCR 1, 10, and 11 implementing Senate Bill 157.

Our primary concern is that proposed regulations stray so far from both the language of Senate Bill 157 and legislative intent, it seems highly likely that the regulations will not be approved by the Legislative Commission as written. This will add significant additional time and expense to the rulemaking process.

It would be much more effective to make an effort now to find a solution that works for Nevada's cultivators and laboratories, rather than adopt a sampling protocol which is clunky, inefficient, expensive – and opposed by everyone. Even the language of the ASTM D8334/D8334M standard itself acknowledges that it needn't be adopted word-for-word; a sentiment that was echoed in the ASTM D37 Committee Vice Chair's November 18, 2025 letter to the CCB.

Our November 2025 written comment, which is attached and incorporated into this comment, detailed the concerns with the proposed changes to Regulations 1, 10, and 11. Those concerns remain. Additionally, in the newest version of the regulations, cultivators are required to maintain documentation of growing conditions and then provide that documentation to laboratories. The ASTM standard does not require cultivators to hand over proprietary information to labs, and no rationale is provided for this requirement.

On behalf of the NCA, we respectfully propose that the Board incorporate ASTM principles into regulatory language that reflects legislative intent and is responsive to the significant input that has been provided by Nevada licensees. We appreciate the Board's consideration and look forward to working toward a practical, Nevada-specific solution.

Respectfully,

Layke A. Martin, Esq.
Executive Director
Nevada Cannabis Association

November 17, 2025

Cannabis Compliance Board
700 Warm Springs Road, Suite 100
Las Vegas, NV 89119
Via email to: Regulations@ccb.nv.gov

Subject: Workshop on Proposed Changes to NCCR 1, 10 & 11

Dear Cannabis Compliance Board Members and Director Humm,

On behalf of the Nevada Cannabis Association, we appreciate the opportunity to comment on the proposed amendments to Regulations 10 and 11 in advance of the workshop on November 19, 2025. While we support science-based rules that promote safety and product integrity, the proposed 60-gram sample requirement is inconsistent with Senate Bill 157 (2025) and imposes unnecessary costs on licensees.

With Senate Bill 157, the Legislature established a scalable, practical sampling framework, and the CCB's proposed regulations diverge from clear legislative intent. The CCB's proposed changes will harm Nevada's licensed businesses, reduce tax revenue to the state, and further inhibit the licensed market's ability to compete with the flourishing illegal cannabis and unregulated hemp market.

I. Proposed Changes to NCCR 10 and 11 are Inconsistent with Senate Bill 157

Neither Senate Bill 157 nor any Nevada statute specifies that a 60-gram sample must be used. To the contrary, the direction provided by the Legislature was to ensure that sampling practices are representative and scientifically sound, not to impose arbitrary weights.

Scaling sample sizes to lot sizes was a key feature of Senate Bill 157. Senate Bill 157 states that:

> *(c) For each lot of cannabis flower, the total aggregate weight of all representative samples to be collected for testing from the lot to be:*
> *(1) For a lot weighing less than 5 pounds, not less than 10 grams;*
> *(2) For a lot weighing 5 pounds or more but less than 10 pounds, not less than 15 grams; and*
> *(3) For a lot weighing 10 pounds or more but not more than 15 pounds, not less than 20 grams.*

The Legislature's clear intent was to increase the sample size proportionate to the size of lot. This is evident not only from the language of the statute itself but also from extensive testimony during committee hearings on the bill. *See Minutes of the March 5, 2025 Meeting of the Senate Committee on Commerce and Labor.*

Further, the proposed changes to Regulation 10 and 11 contradict the clear language of Senate Bill 157 that regulations should "align" with ASTM D8334/D8334M. Notably, the Legislature did not state that the standard was to be adopted or incorporated into the Nevada Revised Statutes. By using the word "align," the Legislature directed the CCB to use the ASTM standard as guidance to develop regulations that were scientifically sound while also being consistent with the scaled sampling sizes set forth in Senate Bill 157.

II. The CCB is Not Required to Adopt a 60-Gram Sample Size Under ASTM D8334/D8334M

The CCB's position is that ASTM D8334/D8334M "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses" requires a composite, representative sample of 60 grams to be collected, regardless of lot size. However, the CCB is not bound to adopt all aspects of the ASTM standard.

Section 1.2 of the ASTM standard states: "Where procedural aspects of this practice differ from local regulatory or jurisdictional requirements, the local regulatory or jurisdictional authority's directives shall take precedence." Section 1.2 makes clear that Nevada is not bound to replicate ASTM's procedures verbatim.

ASTM D8334/D8334M is a voluntary consensus standard developed for broad applicability. By its own terms, it is advisory and defers to local jurisdictional requirements. Section 1.2's language expressly preserves the CCB's discretion to not adopt the standard word-for-word.

III. The Proposed 60-gram Sample Size is Impractical and Expensive

Expanding the maximum testing lot size from 5 to 15 pounds was a practical, evidence-based change by the Legislature. Increasing lot sizes will allow cultivators to more economically test and package lots grown in the same room under the same conditions. It will lower staffing, compliance, and testing costs, which will ultimately lower costs to consumers, allowing retailers to better compete against the unlicensed market.

Adopting a 60-gram sample size wipes out all of the efficiency and cost-savings that the Legislature intended with Senate Bill 157. While 40 grams of the sample may be returned to the cultivator by the lab after testing, this is not a practical solution. Doing so creates additional costs in staff and transportation to move product back and forth between labs and cultivations. It requires labs to store (while maintaining temperature and quality control) large amounts of product to return to cultivators. In the alternative, destruction would result in the loss of hundreds of dollars' worth of product per lot, which becomes hundreds of thousands of dollars in lost retail sales and lost tax revenue per year.

The Small Business Impact Statement dated November 6, 2025 makes clear that the majority of respondents would be negatively impacted by the proposed changes to Regulation 11.

IV. Conclusion

The CCB is under no legal, procedural, or scientific obligation to adopt a fixed 60-gram sample size. In fact, quite the opposite. Under ASTM D8334 Section 1.2, local rules take precedence where they differ with the standard.

Adopting Regulation 11 as written not only directly contradicts Legislative intent and the clear language of SB 157, but it would have a significant detrimental financial impact on cultivators and laboratories. For these reasons, we urge the Board to reject the proposed 60-gram sample size and conform the regulations to Senate Bill 157.

Respectfully,

Layke A. Martin, Esq.
Executive Director, Nevada Cannabis Association

The GMP Collective

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November 18, 2025

Cannabis Compliance Board
700 Warm Springs Road, Suite 100
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Via email to: Regulations@ccb.nv.gov

Dear Cannabis Compliance Board Members and Director Humm,

As the elected Vice-Chair of ASTM International Committee D37 on Cannabis, I appreciate the opportunity to comment on the proposed amendments to Regulations 10 and 11 and to offer technical guidance related to implementation of ASTM D8334 in alignment with Senate Bill 157 (2025). Although I serve in this leadership role, I am submitting these comments in my personal capacity. They reflect my own views as an individual expert and do not represent official positions of ASTM International or Committee D37.

That said, having served on Committee D37 since its formation in 2017, including leading multiple standards through ASTM's consensus process, my aim here is to clarify two points (1) the intent behind key provisions of ASTM D8334, particularly Section 1.2, and (2) how states have successfully worked with ASTM International to provide public access to standards during rulemaking.

1. Intent and Interpretation of Section 1.2, AHJ Precedence Is Intentional

When Committee D37 was formed in 2017, many of the individuals developing these standards, including myself, were not Nevada operators, regulators, or enforcement officials. During balloting, cannabis regulators, industry groups, health professionals, and technical experts shaped the wording you see in today's standards. One consistent piece of feedback we received from government officials, both cannabis and non-cannabis, to ensure the usability of the standards, was the need to preserve the authority of local jurisdictions where statutory or regulatory structures may differ.

For that reason, ASTM D8334 includes an explicit, early statement in 1.2, "Where procedural aspects of this practice differ from local regulatory or jurisdictional requirements, the local regulatory or jurisdictional authority's directives shall take precedence."

This is not accidental language. It reflects:

- The recognition that states vary widely in legislative mandates, sampling authority, and market realities
- The practical need to allow regulators to modify or tailor portions of the practice

This aligns with a long-standing norm in other industries. Voluntary consensus standards are truly voluntary until used by the marketplace, whether it be cited in private contracts or incorporated into law. And even when incorporated, jurisdictional rules should govern.

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Section 1.2 was written specifically so that a state could "align with" D8334 (as directed by SB 157), without being forced to adopt every procedural detail verbatim. It also provides legal clarity for agencies who must reconcile ASTM guidance with the intent of their Legislature.

2. Standards Access During and after the Public Process

The second concern raised is access to ASTM standards during rulemaking. While there is no uniform requirement at the state level that I am aware of, I can speak directly to how this has been handled with other state agencies, including the Colorado Marijuana Enforcement Division (MED) during its incorporation of ASTM D8250.

A few key points:

- ASTM, as a 501(c)(3), does **not** proactively solicit adoption or contact state agencies due to strict anti-lobbying policies.
- However, **when a state regulator reaches out**, ASTM routinely provides a **free, read-only link** for use during public comment and rulemaking.
- Once rules are adopted, agencies typically make a physical copy available for viewing, an approach consistent with Nevada's own practices as per NRS 233B.040(3). For example, see NAC 590.0010 regarding antifreeze standards[1].

Colorado followed this model. MED requested support, ASTM provided a read-only link during rulemaking, and after adoption, MED purchased a physical reference copy for public viewing at its office[2].

If Nevada wishes to do the same, the next step is straightforward. The CCB can contact ASTM's Staff Manager for Committee D37. Contact information is publicly available on the ASTM D37 webpage[3]. In doing so, I would recommend that the agency request:

1. A read-only access link to ASTM D8334 for use during the public comment period; and
2. Guidance from ASTM sales/permissions staff on acquiring a reference copy for public inspection after rule adoption.

Nevada's leadership in incorporating consensus-based standards into cannabis regulation is recognized nationally. Aligning with ASTM D8334, while using Section 1.2 as intended, provides the flexibility needed to honor legislative intent under SB 157 while still grounding the program in the best-available science.

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[1] NAC 590.945 states that "A copy of each standard adopted by reference pursuant to NAC 590.041 to 590.070, inclusive, is available for inspection at the offices of the State Department of Agriculture, Division of Measurement Standards located at 405 South 21st Street, Sparks, Nevada 89431, 2300 East Saint Louis Avenue, Las Vegas, Nevada 89104, and 4780 East Idaho Street, Elko, Nevada 89801."

[2] See Colorado MED Industry Bulletin https://med.colorado.gov/sites/med/files/documents/2023_MED_Industry_Bulletin_New_Rules.pdf

[3] ASTM D37 Committee Page is here: https://www.astm.org/membership-participation/technical-committees/committee-d37

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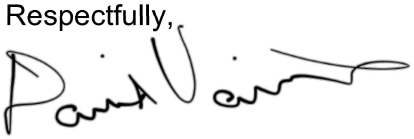
I would encourage the Board to take full advantage of the discretion that Section 1.2 affords and to engage the resources and experience of ASTM staff throughout this process. I am available for any questions or clarification and can be reached at david@gmpcollective.com.

Respectfully,



David Vaillencourt, MS
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March 2, 2026

Sent Via Email

Karalin Cronkhite
700 East Warm Springs Rd,
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Las Vegas, NV 89119
kcronkhite@ccb.nv.gov

Re: Laboratory Response to March 3rd & 4th Nevada Cannabis Compliance Board Proposed Regulation Modifications.

Dear Ms. Cronkhite,

Attached to this correspondence is a comprehensive review and analysis that addresses the NCCRs associated with Senate Bill 157 which are being discussed at the March 3rd and 4th workshops ("Brief"). The Brief has been approved by the following laboratories: 374 Labs, LLC, G3 Labs, LLC, MA and Associates, LLC, ERP, LLC, NV Cann Labs, LLC, RSR Analytical Laboratories, and DPL Nevada LLC dba Digipath Labs. The foregoing laboratories request you take the Brief into consideration when evaluating the implementation of the NCCRs.

In addition to the Brief, I have attached an executive summary as well. The Nevada laboratories look forward to working with the CCB through the issues identified in the Brief. Please include the Brief and Executive Summary in the materials for the upcoming workshop.

Sincerely,

Adam Fulton

Adam R. Fulton, Esq.

COMPREHENSIVE ANALYSIS OF REQUIRED CHANGES TO PROPOSED CHANGES TO NCCRs 1, 4, 5, 6, 7, 9, 10, 11, AND 12

MARCH 3 AND MARCH 4, 2026 CCB WORKSHOPS

Senate Bill 157 Implementation & General Regulatory Revisions

For Compliance with:

Nevada Senate Bill 157 (2025) Statutory Requirements
ASTM D8334/D8334M-20 Standard Practice for Cannabis Sampling
Scientific and Statistical Requirements for Valid Testing
Constitutional Safeguards Against Improper Delegation
Impact Analysis of General NCCR Revisions on Laboratory Operations

Based on Laboratory Coalition Analysis and Review

Including New Findings from ASTM D37 Committee Developments
And Analysis of March 4, 2026 General NCCR Revisions

February 14, 2026

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EXECUTIVE SUMMARY

This document provides a comprehensive, line-by-line analysis of all changes required to the proposed Nevada Cannabis Compliance Regulation changes presented at two Cannabis Compliance Board workshops:

> **Workshop 1 (March 3, 2026):** "Proposed Changes to NCCRs 1, 10, 11" implementing Senate Bill 157 (2025), addressing laboratory sampling and testing standards.
>
> **Workshop 2 (March 4, 2026):** "Proposed Changes to NCCRs 1, 4, 5, 6, 7, 9, 10, 12" addressing general regulatory revisions including definitions, disciplinary proceedings, licensing, production and distribution, sales, packaging, and labeling.

The analysis ensures compliance with Nevada Senate Bill 157 (2025), ASTM D8334/D8334M-20, fundamental statistical requirements for valid cannabis testing, and constitutional safeguards against improper delegation of regulatory authority to private organizations. It further identifies provisions in the March 4 general revisions that directly affect laboratory operations and interact with the SB 157 testing framework.

Critical Finding (SB 157 Provisions): The current proposed regulations contain fundamental deficiencies in sample size requirements, homogenization practices, ASTM version control, and constitutional safeguards that would render cannabis testing statistically meaningless for lots exceeding 5 pounds. For 15-pound lots, the current proposal achieves only a 0.29% effective sampling rate (versus the required 0.88%), resulting in 91% of dangerous Aspergillus contamination going undetected and measurement uncertainty exceeding 100%.

Critical Finding (General Revisions): The March 4 proposed changes introduce several provisions with significant impact on laboratory operations, including: (1) a new NCCR 6.080(12) mandating independent testing laboratory inventory control systems with quarterly physical counts; (2) new NCCR 4.067 administrative hold order provisions that reference laboratory testing failures as grounds; (3) a broadened "imminent health hazard" definition in NCCR 1.110 that removes the prior requirement of immediate correction; (4) restructured violation categories with new Category I (most severe) and renumbered categories II–VII; (5) expanded training requirements under NCCR

6.072 including seed-to-sale system training; and (6) NCCR 6.100 now explicitly prohibiting lot combining before testing completion.

New Finding (February 2026): David Vaillencourt, founder and CEO of The GMP Collective (a consulting firm marketing ASTM standards development services to cannabis operators), was elected Chair of ASTM Committee D37 on Cannabis for the 2026–2027 term. Publicly available LinkedIn communications confirm that Kay Doyle, then Senior Director of Government Affairs, Policy at Green Thumb Industries (GTI)—one of the nation's largest multi-state cannabis operators—congratulated Vaillencourt on his election, and Vaillencourt replied: "I appreciate you and GTIs support getting standards moved forward into the marketplace." This direct evidence of MSO government-affairs support for ASTM cannabis standards development, combined with the CCB's December 2025 revision of R152-24 proposing to adopt approximately 28 private standards by reference (including wholesale mandatory adherence to ASTM D8334), documents a complete pathway from private standards development to mandatory state adoption—the precise scenario the nondelegation doctrine is designed to prevent. The laboratory's February 7, 2026 Comprehensive Review of R152-24 Sections 61–73 identified 15 categories of required revisions.

Primary Required Changes — SB 157 Provisions (March 3 Workshop)

1. Scaled Sample Sizes: Sample sizes must scale proportionally with lot size to maintain the 0.88% sampling rate required for statistical validity (60g collected for 5-lb lots; 120g for 10-lb lots; 180g for 15-lb lots).

2. Proper Homogenization: The entire sample representing 0.88% of the lot must be homogenized together BEFORE subdivision for testing, retesting, and retention.

3. Version-Specific ASTM Adoption: Adopt ASTM D8334-20 (2020 version) specifically, not "most current version," to prevent automatic incorporation of industry-favorable revisions from WK94344.

4. Preserved CCB Authority: Maintain explicit CCB authority to exceed ASTM minimums when scientifically justified, consistent with ASTM D8334 Section 1.2 jurisdictional precedence provision.

5. Restore Aseptic Sampling: Reinstate the deleted aseptic sampling technique requirements mandated by ASTM D8334 Sections 6.3.2 and 6.5.

6. Conflict Resolution: Add Board guidance authority for resolving conflicts between referenced standards.

7. Correct Lot Size Definitions: Align NCCR 1.125 lot definitions with SB 157 statutory language (15 lbs for flower, 45 lbs for trim, 150 lbs for wet material).

8. Correct Typographical Errors: Fix "D88334M" typo in NCCR 11.070(2)(b) to correct designation "D8334M."

Key Findings — General NCCR Revisions (March 4 Workshop)

9. New Laboratory Inventory Requirements — Internal Contradiction (NCCR 6.080(12)): The proposed new subsection 12 mandates that all independent testing laboratories establish a daily weight-based inventory control system and conduct quarterly physical counts "in accordance with

the requirements set forth in subsection 8." This directly contradicts NCCR 6.080(7), which correctly exempts testing laboratories from the daily weight-based inventory system because such a system is operationally impossible in an analytical testing environment. Testing laboratories continuously consume and destroy cannabis in milligram-to-gram increments across dozens of simultaneous analyses; a single sample may have portions dissolved in solvent, plated for microbial culture, ground for digestion, and stored for further testing at any given moment. It is not possible to isolate and weigh these sub-aliquots at the beginning and end of each day without interrupting active analyses and compromising scientific validity. This analysis proposes comprehensive alternative language—an Origin Traceability System—that closes the accountability gap while respecting laboratory operational realities (see Section 11.4).

10. Administrative Hold Orders and Lab Testing (NCCR 4.067): The restructured hold order provisions in NCCR 4.067(1)(b) now explicitly list "Failure of laboratory testing" and "Incomplete or lack of required laboratory testing" as grounds for administrative holds. These provisions must be harmonized with the SB 157 testing framework to ensure that hold order triggers reference the scaled sample sizes and proper homogenization requirements established under NCCR 11.050.

11. Redefined "Imminent Health Hazard" (NCCR 1.110): The broadened definition from "situation requiring immediate correction or cessation" to "substantial hazard to public health" lowers the threshold for triggering regulatory action. Laboratories must understand how this definition interacts with NCCR 4.065 presumptive hazards and potential operational suspension.

12. Restructured Violation Categories (NCCR 4.033–4.061): The addition of a new Category I (most severe, presumptive revocation) and downward renumbering of all subsequent categories changes the penalty framework applicable to laboratory violations. Laboratories should review their risk exposure under the new classification scheme.

13. Prohibition on Lot Combining Before Testing (NCCR 6.100): The addition of "combine lots" to the prohibition in NCCR 6.100 reinforces the integrity of lot-based testing under SB 157 and prevents circumvention of lot size limits through aggregation.

PART I: SUMMARY OF CRITICAL DEFICIENCIES IN THE MARCH 2026 PROPOSED CHANGES

1.1 Sample Size Deficiency

The current proposed NCCR 11.050 requires "at least 20 grams for full panel testing, out of a 60 gram total composite sample collection" for ALL lot sizes. This fixed-sample approach is scientifically invalid because it fails to maintain constant statistical precision as lot sizes increase from 5 to 15 pounds.

Lot Size	Lot Mass	Proposed (Flawed)	Required (Scientific)	Sampling Rate
5 pounds	2,268 g	60g (20g test)	60g (20g test)	0.88% ✓
10 pounds	4,536 g	60g (20g test)	120g (40g test)	0.44% ✗ / 0.88% ✓
15 pounds	6,804 g	60g (20g test)	180g (60g test)	0.29% ✗ / 0.88% ✓

1.2 Homogenization Deficiency

The most critical misunderstanding in current practice is the homogenization requirement. The current proposed approach collects 60 grams, divides into three 20-gram portions, and homogenizes only one 20-gram portion for testing. This destroys statistical validity because the effective sampling rate drops to 0.29% (20g ÷ 6,804g) rather than the required 0.88%.

Required Correction: For each lot size, the entire sample representing 0.88% of the lot must be homogenized together BEFORE subdivision. For 15-pound lots, this means collecting 180 grams total, homogenizing 60 grams together for the testing event, 60 grams for the retesting event, and 60 grams for retention. Alternatively, the entire collected sample of 60 g can be homogenized prior to subdividing it into three separate 20 g amounts used for testing, retesting, and retention. No sample is available for return to the client with this method.

1.3 ASTM Version Control Deficiency

All references to ASTM D8334/D8334M throughout the proposed NCCRs 1, 10, and 11 omit version specification, creating automatic adoption of future revisions. ASTM Work Item WK94344, initiated March 29, 2025, explicitly aims to "remove the 15lb max batch size" from ASTM D8334. Without version-specific adoption, any ASTM changes would automatically become Nevada law without CCB review.

1.4 Constitutional Deficiencies

The proposed regulations adopt ASTM D8334 without preserving CCB authority to modify requirements. This creates private nondelegation doctrine violations, removes critical conflict resolution provisions present in earlier drafts, and eliminates the Section 61 adoption-by-reference framework that provided procedural safeguards.

1.5 Deleted Protections

The March 2026 proposed changes delete several critical protective provisions: (a) Aseptic sampling technique requirements (NCCR 11.070(2)(b)); (b) Section 61 adoption-by-reference framework references; (c) Chain of custody and sample identification specificity (NCCR 11.030(15)); and (d) Guidance authority for resolving conflicts between referenced standards.

1.6 Statistical Comparison: 15-Pound Lot Analysis

Parameter	Current Flawed Practice	Required Scientific Practice
Collected Sample	60 grams	180 grams (3 × 60g)
Homogenized for Testing	20 grams	60 grams
Effective Sampling Rate	0.29%	0.88%
Statistical Confidence	51%	95%
Margin of Error	±17.4%	±5%
Detection Prob. (5% contam.)	12%	31%
Detection Prob. (10% contam.)	22%	61%
Statistical Power	0.21 (INADEQUATE)	0.80 (ADEQUATE)
Conclusion	STATISTICALLY MEANINGLESS	STATISTICALLY VALID

PART II: REQUIRED CHANGES TO NCCR REGULATION 1 (DEFINITIONS)

2.1 Current Proposed Language (Deleted in March 2026 Draft)

> *[1.125 "Lot" defined. "Lot" means: 1. The flowers from one or more cannabis plants of the same batch, in a quantity that weighs 5 pounds (2,268 grams) or less; 2. The leaves or other plant matter from one or more cannabis plants of the same batch, other than full female flowers, in a quantity that weighs 15 pounds (6,804 grams) or less; or 3. The wet flower, leaves or other plant matter from one or more cannabis plants of the same batch used only for extraction, in a quantity that weighs 125 pounds (56,700 grams) or less within 2 hours of harvest.]*

2.2 Identified Issues

1. Conflict with SB 157 Lot Sizes: The proposed definition specifies 5 pounds for flower, but SB 157 Section 3(b)(1) explicitly defines flower lots as "15 pounds or less." The proposed 125 pounds for wet material conflicts with SB 157's 150 pounds.

2. Terminology Inconsistency: SB 157 uses "harvest batch" while the proposed regulation uses only "batch." Terminology must be consistent with the enabling statute.

3. Deletion Without Replacement: The March 2026 draft appears to delete NCCR 1.125 entirely (shown in brackets). SB 157 Section 3(b) defines "lot" explicitly, and the NCCR must include this definition for regulatory clarity.

2.3 Required Revised Language

REVISED NCCR 1.125:

> *1.125 "Lot" defined. "Lot" means: 1. The flowers from one or more cannabis plants of the same harvest batch, in a quantity that weighs 15 pounds (6,804 grams) or less; 2. The leaves or other plant matter from one or more cannabis plants of the same harvest batch, other than full female flowers, in a quantity that weighs 45 pounds (20,412 grams) or less; or 3. The wet flower, leaves or other plant matter from one or more cannabis plants of the same harvest batch used only for extraction, in a quantity that weighs 150 pounds (68,039 grams) or less within 2 hours of harvest.*

Rationale: *This revision aligns NCCR 1.125 with SB 157 Section 3(b), which explicitly defines lot sizes as 15 pounds for flower, 45 pounds for trim/leaves, and 150 pounds for wet material. The change from "batch" to "harvest batch" maintains consistency with both SB 157 and ASTM D8334 terminology.*

PART III: REQUIRED CHANGES TO NCCR REGULATION 10.075 (CULTIVATION STANDARDS)

3.1 Current Proposed Language

> *4. Each cannabis cultivation facility shall adhere to ASTM D8334/D8334M, "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses."*

3.2 Identified Issues

1. No Version Specification: Reference to "ASTM D8334/D8334M" without version designation creates automatic adoption of future revisions, including WK94344 changes that would remove the 15-lb batch size limit.

2. No Jurisdictional Precedence: ASTM D8334 Section 1.2 explicitly states local regulatory directives "shall take precedence," but this is not reflected in the proposed regulation.

3. No Conflict Resolution: No provision for Board guidance when conflicts arise between ASTM requirements and Nevada regulations or scientific evidence.

4. No Future Revision Control: No requirement for affirmative Board approval of future ASTM revisions before they become effective under Nevada law.

3.3 Required Revised Language

REVISED NCCR 10.075(4):

SUMMARY OF PROPOSED CHANGES TO NEVADA CANNABIS COMPLIANCE REGULATIONS

NCCRs 1, 4, 5, 6, 7, 9, 10, 11, and 12

March 3 & March 4, 2026 CCB Workshops

Senate Bill 157 Implementation & General Regulatory Revisions

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PREPARED: FEBRUARY 2026

EXECUTIVE SUMMARY

The Nevada Cannabis Compliance Board (CCB) is conducting two workshops to consider proposed changes to the Nevada Cannabis Compliance Regulations (NCCRs). **Workshop 1 (March 3, 2026)** addresses NCCRs 1, 10, and 11 implementing Senate Bill 157 (2025), which governs laboratory sampling and testing standards. **Workshop 2 (March 4, 2026)** addresses NCCRs 1, 4, 5, 6, 7, 9, 10, and 12 with general regulatory revisions covering definitions, disciplinary proceedings, licensing, production and distribution, sales, packaging, and labeling.

Critical Finding (SB 157): The proposed regulations contain fundamental deficiencies in sample size requirements, homogenization practices, and ASTM version control that would render cannabis testing statistically meaningless for lots exceeding 5 pounds. For 15-pound lots, the current proposal achieves only a 0.29% effective sampling rate (versus the required 0.88%), resulting in an estimated 91% of dangerous Aspergillus contamination going undetected.

Critical Finding (General Revisions): The March 4 proposed changes introduce provisions with significant impact on laboratory operations, including a new laboratory inventory control mandate that internally contradicts the existing laboratory exemption, restructured violation categories, broadened imminent health hazard definitions, administrative hold order provisions referencing laboratory testing failures, and expanded training requirements.

MARCH 3 WORKSHOP: SB 157 TESTING PROVISIONS

The March 3 workshop addresses proposed changes to NCCRs 1, 10, and 11, implementing Senate Bill 157's requirements for cannabis laboratory sampling and testing. Seven critical deficiencies have been identified.

1. Lot Size Definitions (NCCR 1.125)

The proposed draft deletes NCCR 1.125 entirely. The definition that was previously bracketed for deletion specified flower lots at 5 pounds, trim at 15 pounds, and wet material at 125 pounds. **These conflict with SB 157 Section 3(b)**, which explicitly defines lots as 15 pounds for flower, 45 pounds for trim, and 150 pounds for wet material. The regulation must retain NCCR 1.125 with lot sizes aligned to the statute and update terminology from "batch" to "harvest batch" for consistency with both SB 157 and ASTM D8334.

2. Sample Size Deficiency (NCCR 11.050) — CRITICAL

The proposed NCCR 11.050 requires a fixed 60-gram composite—consisting of three 20-gram components for testing, retesting, and retention—regardless of lot size. This flat-sample approach is scientifically invalid because each of the three ASTM D8334 components must independently maintain a statistically valid sampling rate. The 0.88% rate achieved by a 20-gram component in a 5-pound lot drops to just 0.29% when the same 20-gram component is applied to a 15-pound lot.

Update the table's "Required (Scientific)" column to make the three-component structure explicit:

Lot Size	Lot Mass	Proposed (Flawed)	Required (Scientific)	Sampling Rate
5 lbs	2,268 g	60g (3×20g)	60g (3×20g)	0.88% ✓
10 lbs	4,536 g	60g (3×20g)	120g (3×40g)	0.44% ✗ / 0.88% ✓
15 lbs	6,804 g	60g (3×20g)	180g (3×60g)	0.29% ✗ / 0.88% ✓

Required correction: Sample sizes must scale proportionally with lot size to maintain the 0.88% sampling rate. SB 157 Section 3(2)(c) uses "not less than" language nine times, establishing floors, not ceilings.

3. Homogenization Deficiency (NCCR 11.050)

Current proposed practice collects a 60-gram composite, divides it into three 20-gram components—testing, retesting, and retention—then homogenizes only the 20-gram testing component. For a 5-pound lot, this works because each 20-gram component already represents 0.88% of the lot. For a 15-pound lot, however, each 20-gram component represents only 0.29% of the lot. To maintain the required 0.88% sampling rate, each analytical event must homogenize a full 60-gram component, producing a total composite of 180 grams. **The entire component for each analytical event must be homogenized together BEFORE subdivision** into analytical portions. Subdividing first and then homogenizing only a portion is analogous to dividing a deck of cards into three piles, shuffling only one pile, and expecting cards drawn from that pile to represent the entire deck.

4. ASTM Version Control (NCCRs 10.075, 11.030, 11.070)

All references to ASTM D8334/D8334M throughout the proposed regulations omit version specification, creating automatic adoption of future revisions. ASTM Work Item WK94344, initiated March 29, 2025 (48 hours after SB 157 passed the Nevada Senate), explicitly aims to "remove the 15lb max batch size." Without

version-specific adoption of ASTM D8334-20 (the 2020 version), any future ASTM changes would automatically become Nevada law without CCB review.

This concern is compounded by the election of David Vaillencourt—founder of The GMP Collective, a consulting firm marketing ASTM standards development services—as Chair of ASTM Committee D37 for 2026–2027. Publicly available LinkedIn communications confirm that Green Thumb Industries' government affairs director supported Vaillencourt's efforts to move ASTM standards "into the marketplace." The Board must adopt the 2020 version specifically, preserve CCB authority to exceed ASTM minimums, and require affirmative Board approval for any future ASTM revisions.

5. Aseptic Sampling Requirement (NCCR 11.070)

The existing NCCRs specifically reference aseptic sampling techniques in NCCR 11.070(2)(b). While the proposed changes do not explicitly delete aseptic sampling, they restructure the regulation in a manner that removes the specific reference to aseptic technique. Aseptic sampling is mandated by ASTM D8334 Sections 6.3.2, 6.5, and 6.6.3–6.6.4 and is fundamental to preventing sample cross-contamination and ensuring valid microbiological testing results. The proposed NCCR 11.070 must retain the specific reference to aseptic sampling techniques as it appeared in the existing regulation.

6. Section 61 Adoption-by-Reference Framework

The proposed changes remove references to "as adopted by reference in section 61 of this regulation" from NCCRs 11.030(15) and 11.070(2)(b). The Section 61 framework provided procedural safeguards for incorporating ASTM standards into Nevada law. The December 2025 revision of R152-24 expanded this framework to cover approximately 28 private standards. Removing these references eliminates the procedural adoption framework and conflict-resolution mechanisms.

7. Typographical Error (NCCR 11.070)

NCCR 11.070(2)(b) references "D88334M" (extra "8"), which must be corrected to "D8334M."

8. Sample Return Provisions (NCCR 11.070(6))

The proposed language hard-codes "60-gram" composite and "20-gram" return amounts. These must be updated to reference the scaled sample sizes established in revised NCCR 11.050, as a 15-pound lot would have a 180-gram composite with 60-gram retest and retention aliquots.

MARCH 4 WORKSHOP: GENERAL REGULATORY REVISIONS

The March 4 workshop addresses proposed changes to NCCRs 1, 4, 5, 6, 7, 9, 10, and 12 covering a broad range of regulatory topics. The following summarizes the most significant changes across all regulation areas, with particular attention to provisions affecting laboratory operations.

1. Definitions (NCCR Regulation 1)

Imminent Health Hazard (NCCR 1.110): The definition broadens from "situation requiring immediate correction or cessation" to "substantial hazard to the public health," lowering the threshold for triggering regulatory action. The prior corrective-action requirement is relocated to new NCCR 4.065.

Deleted Definitions: "Derived" (1.082), "Label" (1.115), and "Packaging" (1.135) are deleted. The deletion of "Derived" removes the only regulatory definition addressing products obtained from cannabis through extraction, which may create classification ambiguity for laboratories.

2. Disciplinary Proceedings (NCCR Regulation 4)

Restructured Violation Categories (4.033–4.061): A new Category I (most severe) is added for violations "of a severity that precludes continuing operations," including excluded felony convictions and cannabis diversion, with presumptive revocation. All subsequent categories are renumbered downward (former Cat I becomes Cat II, etc.), adding a new Category VII for the least serious violations.

Administrative Hold Orders (4.067): Substantially revised to change the trigger from disjunctive ("fail to comply OR pose significant risk") to conjunctive ("fail to comply AND constitute a substantial hazard"). Specific laboratory-relevant triggers are enumerated: failure of laboratory testing, incomplete testing, and sale of products that failed testing. Holds expire after 30 calendar days unless extended by a hearing officer.

Imminent Health Hazard (4.065): The Board will determine imminent health hazards based on "nature, severity and duration of anticipated injury" and number of potential public illnesses. Presumptive hazards include power outages of 2+ hours, lack of potable water, pest infestations, and other conditions. Cannabis establishments must self-report hazards and may not resume operations without Board approval.

Suspension/Reinstatement (4.105): Replaces prior "summary suspension" framework with Board Agent-issued suspension orders referencing Assembly Bill No. 76 (2025). New reinstatement requires written emergency operating plans and proof of corrective action. Hearing petition deadlines and evidentiary standards are newly specified.

Early Case Conference (4.095): Hearing deadline extends from 45 to 120 days after respondent's answer, with provision for further extensions by agreement.

Subpoena Authority (4.130): Transfers from executive assistant to hearing officer. Settlement authority (4.137) similarly shifts to hearing officers employed by the Board.

3. Licensing (NCCR Regulation 5)

Obsolete provisions (5.025, 5.030) governing dual medical/adult-use applications are deleted. New NCCR 5.038 consolidates the application process for all cannabis establishment licenses with detailed electronic submission requirements. NCCR 5.039 updates the scoring criteria, restructuring the violation history scoring with additional negative-point tiers aligned to the new violation categories. New NCCR 5.039.5 establishes a prospective and conditional license framework with a 120-day suitability investigation window.

4. Production and Distribution (NCCR Regulation 6)

Confidentiality (6.035): Substantially revised to align with NRS 678A.470 and NRS 678B.650. Disclosure to law enforcement and governmental entities is structured with specific authorization channels including joint investigations, court orders, administrative subpoenas, and MOUs.

Training (6.072): Significantly expanded to require a "designated trainer" system, training attestations, and two new training categories: seed-to-sale tracking system operation and proper cannabis handling procedures. No agent may perform duties independently until released from training.

Inventory Control (6.080): New subsection 12 mandates laboratory inventory control systems with daily tracking and quarterly physical counts. This contradicts subsection 7's laboratory exemption from the daily weight-based system. New subsection 8(a) adds GAAP and COSO Framework compliance requirements for seed-to-sale systems. Additional harvest documentation fields are added.

Security (6.085): Battery backup for video cameras increases from 5 minutes to 60 minutes. Camera installation must account for changing plant height and density.

Facility Requirements (6.095): Hand-washing sink requirements are restructured with a new "fully stocked" definition including hot water at 100°F, soap dispensers, paper towels, and trash cans.

Lot Combining Prohibition (6.100): Adds "combine lots" to the existing prohibition, preventing circumvention of lot size limits through pre-testing aggregation. This directly supports the SB 157 framework.

5. Cannabis Sales (NCCR Regulation 7)

NCCR 7.015 adds manual ID verification at both point of entry and point of sale, plus mandatory ID scanner use at either location. NCCR 7.030 adds a prohibition against recommending products to pregnant or breastfeeding women and bans advertising cannabis as "free" or "donated" without a qualifying purchase. Curbside pickup (7.060) removes the advance-ordering mandate but adds a requirement that consumers remain in their vehicles.

6. Production of Cannabis Products (NCCR Regulation 9)

NCCR 9.025 adds new requirements for external flavorings and terpenes to be accompanied by signed attestations of state law compliance. HACCP plan requirements are clarified for special processes (canning, reduced oxygen packaging). Cannabis establishments are prohibited from producing nasal sprays, inhalers, eye drops, or medical devices.

7. Cultivation Good Manufacturing Practices (NCCR Regulation 10)

NCCR 10.080 establishes tiered waste disposal thresholds: amounts exceeding 23,000 grams, 4,000 units, or 50 pounds require a separate Accela request. All destruction must be conducted under surveillance cameras with time-stamped photographic evidence. Root balls are exempt from seed-to-sale tracking.

8. Packaging and Labeling (NCCR Regulation 12)

Minimum font size is set at 8-point (non-italic). Advertising rules (12.070) clarify that internal displays and brand promotions within licensed establishments are exempt from certain warning requirements.

CROSS-WORKSHOP INTERACTIONS

The March 3 and March 4 proposals contain multiple provisions that interact with each other. The following are the most critical integration points requiring coordinated treatment.

- Inventory Control and Scaled Sample Sizes: New NCCR 6.080(12) must accommodate variable composite sizes (30g to 180g) under revised NCCR 11.050. The proposed Origin Traceability System alternative resolves the internal contradiction while supporting scaled sampling.
- Administrative Holds and Testing Framework: NCCR 4.067's references to "failure of laboratory testing" must be defined in relation to the scaled sample sizes and homogenization requirements of revised NCCR 11.050.
- Violation Categories and Laboratory Compliance: The 10% inventory variance threshold in Category II is designed for weight-based systems inapplicable to laboratories. Laboratory compliance should be measured against traceability requirements.
- Imminent Health Hazard and Laboratory Operations: The 2-hour power outage presumption in NCCR 4.065 requires laboratory-specific criteria, as power interruptions affect laboratories differently than product storage facilities.
- Training and SB 157 Implementation: Seed-to-sale training (NCCR 6.072(1)(d)) should be limited to laboratory personnel who interact with the system. SB 157-specific sampling training should be added to NCCR 6.072(3).
- Lot Combining Prohibition and Lot Definitions: NCCR 6.100 directly reinforces SB 157 lot size definitions in NCCR 1.125; both must be adopted in coordination.

KEY RECOMMENDATIONS

For the March 3 Workshop (SB 157)

1. Implement scaled sample sizes maintaining the 0.88% sampling rate across all lot sizes.
2. Mandate pre-subdivision homogenization of the entire composite sample.
3. Adopt ASTM D8334-20 (2020 version) specifically, with preserved CCB authority and affirmative approval for future revisions.
4. Retain the specific reference to aseptic sampling techniques in NCCR 11.070(2)(b) as it appeared in the existing regulation.
5. Align NCCR 1.125 lot definitions with SB 157 statutory language (15/45/150 lbs).
6. Restore Section 61 adoption-by-reference framework and conflict-resolution mechanism.
7. Correct "D88334M" typographical error to "D8334M."

For the March 4 Workshop (General Revisions)

- Replace NCCR 6.080(12) with an Origin Traceability System that resolves the internal contradiction with subsection 7's laboratory exemption while closing the accountability gap.
- Define administrative hold triggers (NCCR 4.067) by cross-reference to the SB 157 testing framework; toll the 30-day expiration during laboratory retesting.
- Clarify that the 10% inventory variance threshold does not apply to laboratories operating under the traceability system.
- Establish laboratory-specific criteria for imminent health hazard determinations under NCCR 4.065.

- Limit seed-to-sale training (NCCR 6.072(1)(d)) to laboratory personnel whose duties involve system interaction.
- Retain the NCCR 6.100 lot combining prohibition as proposed.
- Account for ISO/IEC 17025 requirements in laboratory suspension/reinstatement procedures (NCCR 4.105).
- Adopt both workshops' changes as a coordinated package with explicit cross-references.

4. Each cannabis cultivation facility shall adhere to ASTM D8334/D8334M-20 (2020 version), "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses," as modified by regulations adopted by the Board.

(a) Where the Board's regulations establish requirements that differ from or exceed ASTM D8334/D8334M-20, the Board's regulations shall take precedence, consistent with ASTM D8334 Section 1.2.

(b) Any subsequent revisions to ASTM D8334/D8334M must be affirmatively approved by the Board through formal rulemaking procedures before becoming effective under Nevada law.

(c) Should any conflicts between ASTM D8334/D8334M-20 and other referenced standards be identified, the Board shall issue guidance to resolve such conflicts.

Rationale: *This revision (1) specifies the 2020 version to prevent automatic adoption of WK94344 revisions now being developed under the chairmanship of David Vaillencourt; (2) preserves CCB authority consistent with ASTM Section 1.2; (3) requires affirmative Board action for future ASTM updates; and (4) restores conflict resolution guidance authority deleted from earlier drafts.*

The proposed subsections 10.075(4)(a) through (b) regarding batch documentation requirements for growing conditions and agricultural treatments are appropriate and should be retained as proposed, as they implement ASTM D8334 Section 6.1.3 environmental parameter documentation requirements.

PART IV: REQUIRED CHANGES TO NCCR REGULATION 11.030 (CHAIN OF CUSTODY)

4.1 Current Proposed Language

15. Adhering to [the chain of custody and sample identification requirements of] ASTM D8334/D8334M, "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses[,]" [as adopted by reference in section 61 of this regulation; and] requirements for documentation; and

16. Creating a document to track the chain of custody for samples of products provided to the cannabis independent testing laboratory.

4.2 Identified Issues

1. Missing Version Specification: Same version control issue as NCCR 10.075.

2. Deletion of COC Specificity: Striking "the chain of custody and sample identification requirements of" broadens the reference while removing specificity about what ASTM requirements apply. ASTM D8334 Sections 6.4 and 7.2 contain detailed COC requirements.

3. Deletion of Section 61 Reference: Removing the "as adopted by reference in section 61" language eliminates the procedural framework governing how ASTM standards are incorporated into Nevada law.

4.3 Required Revised Language

REVISED NCCR 11.030(15–16):

> *15. Adhering to the chain of custody and sample identification requirements of ASTM D8334/D8334M-20 (2020 version), Sections 6.4 and 7.2, "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses," as adopted by reference in section 61 of this regulation, including but not limited to: (a) Sample collector contact information and affiliation; (b) Harvest batch and composite sample weights; (c) Reference to sampling protocol utilized (Scheme A or B per ASTM D8334 Section 7.9); (d) Cultivar identification; (e) Documentation of storage containers and containers sampled; and (f) Sampling locations collected.*
>
> *16. Creating and maintaining a document to track the chain of custody for samples of products provided to the cannabis independent testing laboratory, which shall include transfer records using the seed-to-sale tracking system.*

PART V: REQUIRED CHANGES TO NCCR REGULATION 11.050 (SAMPLE SIZES) — CRITICAL

⚠ **CRITICAL SECTION:** This section contains the most significant deficiencies requiring correction. Failure to implement scaled sample sizes will render cannabis testing statistically meaningless for lots exceeding 5 pounds, resulting in 91% of Aspergillus contamination going undetected and measurement uncertainty exceeding 100% for 15-pound lots.

5.1 Current Proposed Language

> *3. A sample of usable cannabis must be at least 20 grams for full panel testing, out of a 60 gram total composite sample collection. A sample of a production run must be the lesser of 1 percent of the total product weight of the production run or 25 units of product, but not less than 5 grams of the production run. Before testing, all samples must be homogenized by the testing laboratory using a homogenization process which has been approved by the appropriate Board Agent and in a manner that prevents contamination of test samples or analytical portions.*

5.2 Critical Deficiencies

Deficiency 1 — Fixed Sample Size Regardless of Lot Size: The proposed language requires 60g total (20g for testing) for ALL lot sizes from less than 5 pounds up to 15 pounds. This violates fundamental statistical principles because sampling precision depends on maintaining a constant

sampling rate (percentage), not a fixed absolute mass. SB 157 Section 3(2)(c) itself acknowledges this principle by establishing scaled minimums.

Deficiency 2 — Inadequate Homogenization Language: The phrase "all samples must be homogenized" is ambiguous. Current flawed practice homogenizes only the 20g testing portion after subdivision. Proper practice requires homogenizing the entire sample representing 0.88% of the lot BEFORE subdivision into analytical portions.

Deficiency 3 — No Scaled Requirements per SB 157: SB 157 Section 3(2)(c) explicitly uses "not less than" language nine times, establishing FLOORS without ceilings. The proposed regulation treats these minimums as if they were maximums, ignoring the clear statutory authority to require larger scientifically justified samples.

Deficiency 4 — Conflict with ASTM D8334 Section 1.2: ASTM D8334 Section 1.2 explicitly states that local regulatory directives "shall take precedence." The proposed regulation fails to exercise this jurisdictional authority to implement scientifically valid sampling requirements.

5.3 SB 157 Statutory Minimums (Not Maximums)

SB 157 Section 3(2)(c) establishes minimum sample weights using "not less than" language: Less than 5 pounds: not less than 10 grams; 5 pounds to less than 10 pounds: not less than 15 grams; 10 pounds to 15 pounds: not less than 20 grams.

The term "minimum/minimums" appears 9 times in ASTM D8334/D8334M-20, reinforcing that the standard operates as a baseline. No maximum sample size is specified anywhere in SB 157, ASTM D8334, or the proposed regulations. ASTM D8334’s only maximum pertains to harvest batch size (15 pounds), not sampling event mass or laboratory panel mass.

5.4 Required Scaled Sample Sizes

Lot Size	Lot Mass	Per-Event	Total Composite	Sampling Rate
< 5 lbs	< 2,268 g	10 g	30 g (3×10g)	≥ 0.88%
5 lbs	2,268 g	20 g	60 g (3×20g)	0.88%
10 lbs	4,536 g	40 g	120 g (3×40g)	0.88%
15 lbs	6,804 g	60 g	180 g (3×60g)	0.88%

5.5 Required Revised Language

REVISED NCCR 11.050(3–5):

> *3. Sample sizes for usable cannabis flower shall scale proportionally with lot size to maintain constant statistical validity, consistent with ASTM D8334/D8334M-20 minimum requirements and Section 1.2 jurisdictional precedence:*

(a) For a lot weighing less than 5 pounds: a total composite sample of not less than 30 grams, consisting of 10 grams for full panel testing, 10 grams for retesting, and 10 grams for sample retention;

(b) For a lot weighing 5 pounds or more but less than 10 pounds: a total composite sample of not less than 60 grams, consisting of 20 grams for full panel testing, 20 grams for retesting, and 20 grams for sample retention;

(c) For a lot weighing 10 pounds or more but less than 15 pounds: a total composite sample of not less than 120 grams, consisting of 40 grams for full panel testing, 40 grams for retesting, and 40 grams for sample retention;

(d) For a lot weighing 15 pounds: a total composite sample of not less than 180 grams, consisting of 60 grams for full panel testing, 60 grams for retesting, and 60 grams for sample retention.

(a) For each analytical event (testing, retesting, or retention), the entire sample portion allocated to that event shall be homogenized together BEFORE any subdivision for analytical portions.

(b) Homogenization shall be performed by the testing laboratory using a homogenization process which has been approved by the appropriate Board Agent and in a manner that prevents contamination of test samples or analytical portions.

(c) The practice of subdividing the composite sample into test/retest/retain portions BEFORE homogenization is prohibited, as this reduces effective sampling rates below statistically valid levels.

5. A sample of a production run must be the lesser of 1 percent of the total product weight of the production run or 25 units of product, but not less than 5 grams of the production run.

PART VI: REQUIRED CHANGES TO NCCR REGULATION 11.070 (SAMPLE COLLECTION & RELEASE)

6.1 Current Proposed Language — Section 11.070(2)(b)

(b) When collecting a sample, [use aseptic sampling techniques and] adhere to ASTM D8334/D88334M, "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses" [adopted by reference in section 61 of this regulation].

6.2 Identified Issues

Issue 1 — Typographical Error: "D88334M" contains an extra "8" and must be corrected to "D8334M."

Issue 2 — Deletion of Aseptic Sampling Requirement: Striking "use aseptic sampling techniques and" removes a critical requirement mandated by ASTM D8334 Sections 6.3.2, 6.5, 6.5.10, 6.5.11, and 6.6.3–6.6.4. Aseptic technique is fundamental to preventing sample cross-contamination and ensuring valid microbiological testing results.

Issue 3 — Deletion of Section 61 Reference: Removing "adopted by reference in section 61" eliminates the procedural adoption framework.

Issue 4 — No Version Specification: Same version control issue as other sections.

6.3 Required Revised Language — Section 11.070(2)(b)

> *(b) When collecting a sample, use aseptic sampling techniques and adhere to ASTM D8334/D8334M-20 (2020 version), "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses," adopted by reference in section 61 of this regulation, as modified by the scaled sample size requirements of NCCR 11.050.*

6.4 Current Proposed Language — Section 11.070(6) (Sample Return)

> *6. [...] Of the 60-gram usable cannabis composite collected, the 20-gram retest and 20-gram retention aliquots may be returned to the cultivation establishment upon receipt of passing results, and documentation of the transfer of the sample aliquots using the seed-to-sale tracking system. [...]*

6.5 Issue: Fixed Return Amounts

The 60-gram and 20-gram return provisions are hard-coded and must be updated to reference the scaled sample sizes established in revised NCCR 11.050. For 15-pound lots, the composite will be 180 grams with 60-gram retest and 60-gram retention aliquots.

6.6 Required Revised Language — Section 11.070(6)

> *6. If a sample provided to a cannabis independent testing laboratory pursuant to this section passes the testing required by NCCR 11.050, the cannabis independent testing laboratory shall release the entire lot or production run for immediate manufacturing, packaging and labeling for sale to a cannabis sales facility, a cannabis production facility or, if applicable, another cannabis cultivation facility. Upon receipt of passing results: (a) The retest and retention aliquots collected pursuant to NCCR 11.050(3) may be returned to the cultivation establishment, with documentation of the transfer using the seed-to-sale tracking system; (b) Alternatively, the laboratory may dispose of samples kept pursuant to this subsection and document the disposal using the seed-to-sale tracking system.*

Rationale: *This revision replaces hard-coded gram amounts with dynamic references to NCCR 11.050(3), ensuring the return provisions automatically align with whatever lot-size-appropriate composite was collected. Depending on whether or not the total collected sample is homogenized prior to division into the testing, retesting, and retention samples (required for statistical validity in a 60 g total sample from a 15 pound lot) it may be impractical to return homogenized cannabis to the cannabis cultivation facility.*

aliquots

PART VII: CONSTITUTIONAL AND LEGAL SAFEGUARDS

7.1 Version-Specific Adoption Requirement

All references to ASTM D8334/D8334M throughout NCCRs 1, 10, and 11 must specify the 2020 version (D8334/D8334M-20) to prevent automatic incorporation of future revisions developed by industry-controlled ASTM committees. This is especially critical given that David Vaillencourt, whose GMP Collective markets ASTM standards development services to cannabis operators, was elected Chair of ASTM Committee D37 for the 2026–2027 term.

7.2 Required Section 61 Language (Adoption by Reference)

REVISED Section 61:

> *61. The Board adopts by reference ASTM D8334/D8334M-20 (2020 version), "Standard Practice for Sampling of Cannabis/Hemp Post-Harvest Batches for Laboratory Analyses," as published by ASTM International.*
>
> > *(1) Any subsequent revisions to ASTM D8334/D8334M must be affirmatively approved by the Board through formal rulemaking procedures, including public notice and comment, before becoming effective under Nevada law.*
> >
> > *(2) Consistent with ASTM D8334 Section 1.2, where the Board's regulations establish requirements that differ from or exceed ASTM D8334/D8334M-20, the Board's regulations shall take precedence.*
> >
> > *(3) No provision of this section shall be construed to limit the Board's authority to adopt sample size requirements that exceed ASTM D8334/D8334M-20 minimums when necessary to maintain statistical validity or protect public health.*
> >
> > *(4) Should any conflicts between ASTM D8334/D8334M-20 and other referenced standards be identified, the Board shall issue guidance to resolve such conflicts.*

7.3 Rejection of Automatic Adoption Mechanism

The previously proposed R152-24 Section 61(4) "deemed approved" provision must be rejected. That provision stated that if the Board does not disapprove a standard change within 30 days, it is automatically adopted. This mechanism reverses the burden of action (automatic adoption rather than affirmative adoption), provides inadequate review time (30 days versus Nevada's typical 60–180 days), lacks required procedural safeguards (no public notice/comment specified), and likely violates NRS 233B.040 requirements for affirmative agency action.

7.4 NRS 233B.040 Compliance

NRS 233B.040(3) requires that when adopting standards by reference, the CCB must file copies with the Secretary of State and State Library, disclose the source and purchase price, and make copies available for public inspection. Any adoption-by-reference provision must satisfy these

procedural requirements for the specific version adopted. The "most current version" language in SB 157 cannot override these administrative procedure requirements, as automatic incorporation of unknown future standards cannot satisfy mandatory filing and disclosure obligations.

PART VIII: NEW FINDINGS — ASTM D37 LEADERSHIP, GTI SUPPORT, DECEMBER 2025 R152-24 REVISIONS, AND WK94344 IMPLICATIONS

8.1 Vaillencourt Elected Chair of ASTM D37 (January 2026)

In a development that significantly intensifies the regulatory capture concerns documented in prior analyses, David Vaillencourt was elected Chair of ASTM International's Committee D37 on Cannabis for the 2026–2027 term. The election ballot closed December 20, 2025. Darwin Millard was elected Vice Chair.

Vaillencourt is the founder and CEO of The GMP Collective, a consulting firm that explicitly markets "ASTM Standards Development and Benchmarking" services to cannabis operators. His election to the chairmanship of the committee responsible for developing cannabis testing standards—including ASTM D8334—represents a direct conflict of interest: the individual whose business profits from industry-favorable standards now controls the committee that develops those standards.

8.1.1 Green Thumb Industries Support for Vaillencourt's ASTM Leadership

Publicly available LinkedIn communications from approximately January 2026 provide direct evidence of the relationship between Vaillencourt's ASTM leadership and multi-state operator support. In the comment thread on Vaillencourt's public LinkedIn post announcing his election as ASTM D37 Chair, Kay Doyle—then Senior Director, Government Affairs, Policy at Green Thumb Industries (GTI)—commented:

> *"Congratulations!!! What a great leadership team!"*

Vaillencourt replied directly:

> *"Kay Doyle thanks! I appreciate you and GTIs support getting standards moved forward into the marketplace"*

This exchange is significant for several reasons:

First, Vaillencourt does not merely thank Doyle personally; he explicitly thanks "GTI" as an organization—confirming that Green Thumb Industries, one of the nation's largest multi-state cannabis operators (18+ manufacturing facilities, 90+ retail locations across 15 U.S. markets), has been actively supporting Vaillencourt's efforts to move ASTM cannabis standards "into the marketplace."

Second, Doyle's role at GTI was not a scientific or laboratory position. Her LinkedIn profile identifies her as "Senior Director, Government Affairs, Policy" at GTI from April 2023 through November 2025, with a professional description of "Regulatory Policy Leader, Attorney," and she

holds a law degree from Boston University School of Law. GTI's support for ASTM cannabis standards was thus channeled through its government affairs and regulatory policy apparatus—the corporate function responsible for influencing regulatory outcomes favorable to the company's commercial interests.

Third, the phrase "getting standards moved forward into the marketplace" reveals the operative objective. The concern is not that ASTM develops voluntary industry standards—that is ASTM's legitimate function. The concern is that those standards, developed with MSO support through government-affairs channels, are then incorporated by reference into binding state regulations (as proposed in R152-24, Section 61), at which point they cease to be voluntary and become mandatory regulatory requirements that all market participants must follow. When an MSO's government affairs director supports "getting standards moved forward into the marketplace" and those standards are simultaneously being proposed for mandatory adoption by state regulators, the pathway from private standards development to public regulatory capture is fully documented.

Fourth, Green Thumb Industries is a publicly traded company (OTCQX: GTBIF) with documented operations in Nevada. The standards that Vaillencourt chairs and that GTI's government affairs apparatus supports directly affect GTI's Nevada operations—including batch size limits, sampling requirements, and testing protocols that determine the cost and speed of getting GTI products to market. Industry-favorable standards (larger batch sizes, reduced sampling, streamlined testing) provide direct economic benefit to high-volume operators like GTI at the expense of testing rigor and public health protection.

8.2 ASTM D37 February 2026 Atlanta Meeting

The ASTM D37 Full Committee Meeting was held February 2–4, 2026, in Atlanta, Georgia—exactly one month before the CCB's March 3, 2026, workshop on the proposed NCCR changes. This meeting was the first under Vaillencourt's chairmanship and may have included discussion of Work Item WK94344 to revise ASTM D8334.

8.3 WK94344 Status and Implications

ASTM Work Item WK94344, initiated March 29, 2025, remains active. Its stated rationale is to "revamp standard to make more appropriate for industry, align with global standards, and remove the 15lb max batch size." The Technical Contact listed is Marie Duncan, identified in prior analysis as an MSO Quality Director and ASTM D37.02 Subcommittee Chair. Key concerns regarding WK94344 under Vaillencourt's chairmanship include: removal of the 15-lb maximum batch size would directly contradict SB 157's lot size definitions; changes to minimum sample masses could undermine Nevada's sampling requirements; the "align with global standards" rationale could introduce requirements inappropriate for Nevada's regulatory environment; and any revised standard would automatically become Nevada law without CCB review if version-specific adoption is not implemented.

8.4 Implications for the Proposed NCCR Changes

These developments make version-specific adoption of ASTM D8334-20 not merely advisable but constitutionally essential. The CCB must adopt the known 2020 version of the standard and

preserve explicit authority to evaluate and approve or reject any future revisions through formal rulemaking. Failure to do so effectively delegates Nevada's cannabis testing regulatory authority to an ASTM committee now chaired by an individual with documented financial conflicts of interest.

8.5 December 2025 CCB Revisions to R152-24 (Sections 61–73)

In October–December 2025, the Cannabis Compliance Board issued a substantially revised draft of R152-24 (LCB File No. R152-24, CCB Rev. 10/01/2025, Sections 61–73, dated 12/10/2025). This revision fundamentally restructured the framework for incorporating private standards into Nevada's cannabis testing regulations.

8.5.1 Expansion from Targeted Adherence to Wholesale Adoption by Reference

The December 2025 revision dramatically expanded the scope of private standards incorporated into Nevada law. The June 2024 version of R152-24 required adherence to specific provisions of approximately 4 ASTM standards. The December 2025 revision restructures this into a two-step framework: Section 61 formally adopts by reference approximately 28 separate publications from ASTM International, AOAC International, ISO, the FDA, USDA, WHO, OECD, and the American Herbal Pharmacopoeia; then NCCR 11.025 (as amended in Section 65) requires laboratories to "adhere to" these publications.

This structural shift fundamentally changes the legal status of these private standards. Under the June 2024 approach, the Board required adherence to specific provisions while retaining interpretive flexibility. Under the December 2025 approach, all 28 publications become part of Nevada's mandatory regulatory framework by reference—making every provision of every adopted standard an enforceable regulatory requirement.

8.5.2 Removal of the Conflict Resolution Mechanism

The June 2024 version included a critical provision at proposed NCCR 11.025(1)(g): "Should any conflicts between references be identified, the Board shall issue guidance." The December 2025 revision removed this mechanism without replacement—precisely when it became most essential. The 28 adopted publications contain overlapping and in many cases contradictory requirements for sample preparation methodologies, analytical method validation criteria, microbiological testing procedures, chain of custody documentation, and sampling protocols. Without a conflict-resolution mechanism, a laboratory that follows one adopted standard may simultaneously violate another, creating an impossible compliance environment and exposing laboratories to arbitrary enforcement.

8.5.3 Version Pinning: The "June 20, 2024" Date Problem

The December 2025 revision struck "most current" from Section 61 and replaced it with "June 20, 2024 version," producing the text: "The Board hereby adopts by reference the [most current] June 20, 2024 version of the standards referenced below." However, ASTM D8334/D8334M-20 was approved November 1, 2020. There is no "June 20, 2024" version of ASTM D8334, nor does that date correspond to the publication dates of most other adopted standards. The date appears to reference the CCB's original R152-24 filing date, not the publication dates of the individual standards.

Conflating the regulation's filing date with the standards' publication dates creates legal ambiguity about exactly which version of each publication is being incorporated into Nevada law. The laboratories recommend that each adopted standard be identified by its specific version and publication date (e.g., "ASTM D8334/D8334M-20, approved November 1, 2020") rather than by a blanket date that does not correspond to any standard's actual version.

8.5.4 Wholesale Incorporation of ASTM D8334

The December 2025 revision expanded ASTM D8334 adherence from targeted provisions (chain of custody and sample identification) to wholesale mandatory adherence to the entire standard. The laboratories identify specific conflicts between full ASTM D8334 incorporation and the existing NCCR framework, including: ASTM D8334 Section 4.2 specifies a maximum harvest batch of 6.8 kg (15 lb) while NCCR lot sizes may differ; ASTM D8334 Section 7.10.6.2 requires at least ten discrete sample specimens while the NCCR specifies no minimum specimen count; ASTM D8334 Section 7.8.2 requires a 60g composite (3×20g) while NCCR 11.050.3 requires only a minimum 20g sample; and ASTM D8334's environmental documentation requirements (Section 6.1.3) would impose cultivator obligations through a regulation directed at laboratories.

The laboratories recommend either removing ASTM D8334 from the Section 65 adherence list pending harmonization, or retaining it with qualifying language that NCCR provisions control where conflicts exist.

8.5.5 Nondelegation Doctrine and NRS 233B Concerns

The structural shift from targeted adherence to wholesale adoption by reference of 28 private-sector publications raises two significant legal concerns **identified by the laboratories.** First, by incorporating private standards developed by ASTM International, AOAC International, ISO, and other private organizations into binding regulations, the CCB is effectively delegating regulatory authority to private bodies whose standards-development processes are not subject to Nevada's public notice-and-comment requirements under NRS 233B, and whose committee membership and voting structures are not subject to public accountability. Second, the substantive expansion from individual adherence requirements to blanket adoption-by-reference of 28 publications may constitute a material change in scope requiring resubmission through the Nevada Administrative Procedure Act.

These nondelegation concerns are directly compounded by the regulatory capture evidence documented in Sections 8.1 through 8.3. When the chairman of the ASTM committee developing these standards publicly acknowledges the support of a major MSO's government affairs apparatus in "getting standards moved forward into the marketplace," and those same standards are then proposed for mandatory adoption by reference into state law, the nondelegation doctrine serves its core constitutional function: preventing the exercise of state regulatory power by private parties who are not accountable to Nevada's citizens.

8.5.6 Laboratory Recommendations for R152-24 Sections 61–73

The laboratories identified six critical categories of required revisions:

(1) Conflict Resolution: Restore the removed conflict-resolution mechanism and preserve Board-agent authority to approve laboratory-specific SOPs, ensuring that laboratories are not

subjected to 28 overlapping and potentially contradictory standards with no mechanism for obtaining authoritative guidance;

(2) ASTM D8334 Scope: Remove wholesale mandatory adherence to ASTM D8334 from Section 65 pending harmonization, qualify adherence to subordinate ASTM provisions to the NCCR where conflicts exist, or revert to the prior targeted approach limited to chain of custody and aseptic sampling provisions;

(3) Default Disapproval: Replace the ambiguous double-negative construction in Section 61.3 with an affirmative-approval requirement—no privately-developed standard change should take regulatory effect in Nevada without affirmative Board action;

(4) Sample Retention: Establish explicit retention requirements for retest and retention aliquots of passing lots, prohibit return of retained samples to the submitting establishment, and clarify the regulatory relationship between the NCCR 20g minimum and the ASTM 60g composite;

(5) Version Pinning: Replace the blanket "June 20, 2024 version" date with specific version identifiers for each adopted standard, particularly ASTM D8334/D8334M-20 (approved November 1, 2020), to prevent automatic incorporation of future industry-directed revisions;

(6) "As Received" Definition: Clarify that the "as received" definition establishes the reporting basis (wet-weight) and does not preclude the processing, conditioning, homogenization, or sample preparation required by the analytical methods adopted by reference in Section 61 and by the homogenization requirement of NCCR 11.050.3.

8.6 Convergence: GTI Support, ASTM D37 Chairmanship, and Mandatory State Adoption

The evidentiary record now documents a complete pathway from private standards development to state regulatory capture:

(a) David Vaillencourt, through The GMP Collective, markets ASTM standards development services to cannabis operators creating a direct financial interest in the content and adoption of ASTM cannabis standards;

(b) Green Thumb Industries, through its Senior Director of Government Affairs, Policy (Kay Doyle), actively supported Vaillencourt’s efforts to move ASTM standards "into the marketplace"—support that Vaillencourt publicly acknowledged and for which he expressed appreciation;

(c) Vaillencourt was elected Chair of ASTM Committee D37 in December 2025, giving him direct control over the committee developing ASTM D8334 and overseeing Work Item WK94344 to revise that standard;

(d) The CCB’s December 2025 revision of R152-24 proposes to adopt ASTM D8334 by reference as a mandatory regulatory requirement—converting the standard Vaillencourt chairs from a voluntary industry practice into binding Nevada law;

(e) The December 2025 revision simultaneously removed the conflict-resolution mechanism and proposed ambiguous version language that could permit future ASTM revisions (developed

under Vaillencourt's chairmanship with MSO support) to be incorporated into Nevada law without independent CCB evaluation.

This convergence of private financial interest, MSO government-affairs support, ASTM committee control, and proposed mandatory state adoption is precisely the scenario the nondelegation doctrine is designed to prevent. The recommendations in this document—version-specific adoption of ASTM D8334-20, affirmative Board approval for future revisions, conflict-resolution mechanisms, and preservation of CCB regulatory authority—are the minimum safeguards necessary to prevent the delegation of Nevada's cannabis testing regulatory authority to private parties with documented financial conflicts of interest.

PART IX: SCIENTIFIC AND STATISTICAL REQUIREMENTS SUMMARY

9.1 The 0.88% Sampling Rate

The 0.88% sampling rate derives from the fundamental statistical formula $n = (Z \times CV/E)^2$, requiring approximately 62 independent observations for 95% confidence with 5% margin of error. When adjusted for real-world design effects (spatial correlation between sampling increments, $D_{eff} \approx 2–3$), the 0.88% rate provides acceptable precision. This rate must remain constant as lot sizes increase—meaning absolute sample mass must scale proportionally with lot mass.

9.2 Homogenization: The Most Critical Requirement

The entire sample representing 0.88% of the lot must be homogenized together before subdivision. The deck-shuffling analogy applies: you cannot divide a deck of cards into three piles, shuffle only one pile, and expect cards drawn from that pile to represent the entire deck. Subdividing first and then homogenizing only a portion reduces the effective sampling rate to 0.29% for 15-pound lots, producing measurement uncertainty exceeding 100%.

9.3 Public Health Consequences of Non-Compliance

The consequences of failing to implement proper scaled sampling and homogenization are severe and quantifiable:

Aspergillus Detection: 91% of dangerous contamination at 3% prevalence goes undetected under current practice.

THC Measurement: For 15-lb lots, cannabis tested at 20% THC could be reported anywhere from -0.4% to 40.4% at k=1 confidence.

ISO/IEC 17025: Measurement uncertainty exceeding 50% renders results scientifically meaningless and jeopardizes laboratory accreditation.

Statistical Power: 0.21 under current practice (adequate is 0.80), meaning testing has only a 21% chance of detecting real quality differences.

PART X: COMPREHENSIVE REDLINED CHANGES SUMMARY (SB 157 PROVISIONS)

The following table summarizes all required changes to the March 2026 Proposed Changes to NCCRs 1, 10, 11:

Section	Current Proposed	Required Change	Authority/Rationale
NCCR 1.125	Lot defined: 5 lbs flower, 125 lbs wet [DELETED]	Restore with SB 157 sizes: 15 lbs flower, 45 lbs trim, 150 lbs wet	SB 157 §3(b)
NCCR 10.075(4)	"ASTM D8334/D8334M" (no version)	Add "-20 (2020 version)" + CCB precedence + future revision control	ASTM §1.2; NRS 233B.040
NCCR 11.030(15)	Deletes COC specificity and §61 reference	Restore COC requirements, add version, restore §61 reference	ASTM §6.4, 7.2
NCCR 11.050(3)	Fixed 60g/20g for ALL lot sizes	Scaled: 30g–180g composites based on lot size; mandate pre-subdivision homogenization	SB 157 §3(2)(c) "not less than"; ASTM §1.2, 7.8
NCCR 11.070(2)(b)	Deletes aseptic req.; typo "D88334M"; deletes §61	Restore aseptic sampling; fix typo; restore §61; add version; add scaled reference	ASTM §6.3.2, 6.5
NCCR 11.070(6)	Hard-coded 60g/20g return amounts	Dynamic reference to NCCR 11.050(3) scaled amounts	Consistency with scaled sampling
Section 61	Version-unspecified; may include auto-adopt	Version-specific D8334-20; affirmative approval for future revisions; CCB precedence	NRS 233B.040(3); Carter v. Carter Coal Co.

PART XI: ANALYSIS OF MARCH 4, 2026 WORKSHOP PROVISIONS AFFECTING LABORATORIES AND TESTING

The following analysis identifies and evaluates provisions in the proposed general NCCR revisions (March 4, 2026 Workshop) that directly or indirectly impact cannabis independent testing

laboratory operations, the SB 157 testing framework, or the integrity of the sampling and quality assurance system.

11.1 Redefined "Imminent Health Hazard" (NCCR 1.110)

Proposed Change: The definition changes from "situation that requires immediate correction or cessation of operations to prevent injury or serious illness as determined by the Board pursuant to NCCR 4.065" to the broader "substantial hazard to the public health."

Laboratory Impact: This broadened definition significantly lowers the threshold for triggering regulatory action under NCCR 4.065. Under the prior definition, an "imminent health hazard" required a situation necessitating "immediate correction or cessation of operations." The new definition—"substantial hazard to the public health"—removes the immediacy and cessation-of-operations components, potentially allowing the Board to invoke imminent health hazard authority in a wider range of circumstances.

Concern: For laboratories, this means that test results identifying contamination, potency anomalies, or other adverse findings could more readily trigger the imminent health hazard cascade, including operational suspensions under NCCR 4.065 and administrative holds under NCCR 4.067. Laboratories should ensure their reporting protocols and communication with the Board account for this expanded definition.

Recommendation: The Board should clarify in NCCR 4.065 or accompanying guidance that the broadened definition of "imminent health hazard" does not alter the evidentiary standard for operational suspensions of laboratories based on test findings, and that laboratory reporting of adverse test results is not itself an imminent health hazard event triggering laboratory suspension.

11.2 Deleted Definitions: NCCR 1.082 "Derived," 1.115 "Label," 1.135 "Packaging"

Proposed Change: The March 4 draft deletes the definitions of "Derived" (1.082), "Label" (1.115), and "Packaging" (1.135).

Laboratory Impact: The deletion of NCCR 1.082 "Derived" removes the only regulatory definition addressing whether a product was "obtained directly from a plant of the genus Cannabis...whether naturally or through an extraction process approved by the Board." This definition is relevant to laboratories because it informs which products require testing as cannabis products versus derived products, and it explicitly protects decarboxylation of THCA. Without this definition, ambiguity arises regarding the testing classification of decarboxylated and extracted products.

Recommendation: If NCCR 1.082 is deleted, the Board should ensure that equivalent definitional clarity exists elsewhere in the NCCRs or in Title 56 to prevent classification disputes that could affect laboratory testing obligations.

11.3 Restructured Violation Categories (NCCR 4.033–4.061)

Proposed Change: The March 4 draft adds a new Category I violation class (most severe, presumptive revocation) and renumbers all subsequent categories. Former Category I becomes Category II, former Category II becomes Category III, and so on through the new Category VII.

New Category I (NCCR 4.033): Covers violations "of a severity that precludes the continuing operations of a cannabis establishment or the maintenance of a cannabis establishment agent card," including conviction of excluded felony offenses and diversion of cannabis. Presumptive penalty is revocation.

New Category II (NCCR 4.035): Covers violations making a person "ineligible to receive, renew, or maintain a license," now including 16 enumerated subcategories. Of particular relevance to laboratories: (3) making intentionally false statements to the Board or Board Agents; (4) intentionally destroying or concealing evidence; (13) undocumented inventory variance exceeding 10% of total inventory; and (16) engaging in an act or omission that poses an imminent threat to public health or safety.

Laboratory Impact: The restructured categories increase the severity classification of certain violations that could apply to laboratories. In particular, undocumented inventory variance exceeding 10% (now Category II rather than former Category I) carries a presumptive penalty structure that is more severe under the new framework. Additionally, the interaction between the broadened "imminent health hazard" definition (NCCR 1.110) and the new Category II §(16) "imminent threat to public health" creates a lower threshold for severe disciplinary action against laboratories.

Recommendation: Laboratories should review and update their compliance programs to reflect the new violation category structure, paying particular attention to inventory control (see Section 11.4 below regarding new NCCR 6.080(12)) and ensuring that internal SOPs address the new Category II violation triggers.

11.4 New Laboratory Inventory Control Requirement (NCCR 6.080(12))

11.4.1 Proposed New Language

> *"12. All cannabis independent testing laboratories shall establish and implement an inventory control system that accurately records and tracks all cannabis and cannabis product test samples, including acquisitions, testing in progress, samples consumed during testing, samples destroyed, and the resulting beginning and ending inventory for each business day in the seed-to-sale tracking system. (a) Independent testing laboratories shall conduct physical inventory counts quarterly in accordance with the requirements set forth in subsection 8."*

11.4.2 Critical Internal Contradiction

The proposed changes to NCCR 6.080 contain a critical internal contradiction that renders subsection 12 as written incapable of compliance. On page 21 of the March 4 draft, NCCR 6.080(7) correctly reinserts the exemption: "…except for a cannabis independent testing laboratory…" which is the proper and operationally necessary language recognizing that testing laboratories cannot maintain the daily weight-based inventory system applicable to other cannabis establishments. However, new subsection 12 on page 23 then imposes precisely the type of inventory requirement that subsection 7 exempts—demanding "resulting beginning and ending inventory for each business day in the seed-to-sale tracking system" and quarterly physical counts "in accordance with the requirements set forth in subsection 8."

These two provisions are irreconcilable. Subsection 7 exempts laboratories from the daily weight-based inventory system because such a system is operationally impossible in an analytical testing environment. Subsection 12 then mandates the substance of what subsection 7 exempts. The Board must resolve this contradiction.

11.4.3 Why Subsection 12 As Written Cannot Be Complied With

It is not feasible to implement subsection 12 as written in a cannabis testing laboratory while active analysis of samples is being conducted. Testing laboratories continuously consume and destroy cannabis during the analytical process in increments ranging from milligrams to grams, continuously throughout each business day, across dozens or hundreds of active analyses simultaneously.

A single sample may have portions in multiple stages of destruction at any given moment: a milligram-scale aliquot dissolved in solvent for potency analysis, another aliquot plated for microbial culture, another being ground for heavy metals digestion, and a remnant stored awaiting further testing. It is not possible to isolate and weigh these sub-aliquots at the beginning and end of each day without interrupting active analyses, contaminating samples, and compromising the scientific validity of the results. The requirement for "resulting beginning and ending inventory for each business day" is operationally impossible.

Furthermore, the cross-reference to "the requirements set forth in subsection 8" incorporates by reference the full inventory reconciliation framework designed for cultivation and production facilities—facilities where cannabis moves in discrete, weighable units. This framework includes requirements for reconciling "raw material used to create the finished product," documenting "significant variances," and performing "quarterly physical inventory counts...reconciled to the perpetual inventory records." These requirements presuppose a weight-based inventory system that has no operational equivalent in an analytical testing laboratory.

11.4.4 The Accountability Gap That Must Be Addressed

Cannabis independent testing laboratories occupy a unique position in the regulatory system: they are the only category of cannabis establishment that routinely possesses cannabis from multiple cultivators and production facilities simultaneously, yet laboratories are currently the only category exempt from comprehensive inventory controls. This creates an accountability gap that could be exploited for diversion—the very risk that the inventory control system at subsection 7 was designed to prevent for all other establishment types.

The Board is correct to address this gap. The solution, however, must be calibrated to the operational reality of analytical testing. The core regulatory objective is not to know the precise weight of cannabis in a laboratory at every moment—it is to ensure that no cannabis of unknown or undocumented origin exists within the facility at any time.

11.4.5 Proposed Alternative: Origin Traceability System

While we believe that the current regulations adequately allow traceability of cannabis during the time it is in the laboratory's possession up through and including destruction. If additional changes to the regulation are required we propose substitute language for subsection 12 that preserves the existing exemption from the daily weight-based inventory system

while establishing a traceability framework appropriate to laboratory operations. The core principle is that every gram of cannabis within a testing facility must be identifiable as to its origin, chain of custody, and current status at all times, even though precise real-time weight accounting is not feasible during active analysis.

Proposed Alternative Language for NCCR 6.080(12):

12. Notwithstanding the exemption provided in subsection 7, each cannabis independent testing laboratory shall establish and implement a sample traceability system that ensures all cannabis and cannabis products within the facility can be identified as to their origin, chain of custody, and current status at all times. The sample traceability system must include, without limitation:

Upon receipt of any cannabis or cannabis product sample, the cannabis independent testing laboratory shall:

(1) Record the sample in the seed-to-sale tracking system within 24 hours of receipt;

(2) Assign a unique internal sample identifier that is cross-referenced to the seed-to-sale tracking identification tag, the batch, lot, or production run number, and the chain-of-custody documentation required by NCCR 11.030;

(3) Document the total weight of the sample received, the name and license number of the cannabis establishment from which the sample was collected, and the date and time of receipt; and

(4) Verify and document the condition and integrity of the sample packaging and any tamper-evident seals.

At any time during business or non-business hours, the cannabis independent testing laboratory must be able to identify, for any and all cannabis or cannabis product material found anywhere within the laboratory facility, the following:

(1) The cannabis establishment from which the material originated;

(2) The batch, lot, or production run number associated with the material;

(3) The seed-to-sale tracking identification number associated with the material;

(4) The date the material was received by the laboratory;

(5) The current status of the material, which shall be categorized as one of the following: (I) Awaiting analysis; (II) In active analysis; (III) Analysis complete, awaiting disposal or return; (IV) Retained pursuant to NCCR 11.070(5); or (V) Designated for disposal; and

(6) The physical location of the material within the facility, identified by room or designated storage area.

All sample containers, aliquots, extracts, and secondary samples created during the processing or testing of a sample must bear or be accompanied by a label or identifier that is traceable to the originating sample record, consistent with NCCR 11.030(6). A cannabis independent testing laboratory shall not possess any cannabis or cannabis product material that cannot be traced to a registered sample record.

The cannabis independent testing laboratory shall document the disposal of all cannabis and cannabis product material in the seed-to-sale tracking system pursuant to NCCR 6.082 and NCCR 11.070(4), including:

(1) The internal sample identifier and seed-to-sale tracking number;

(2) The date of disposal;

(3) The method of disposal;

(4) A notation as to whether the sample was consumed during analysis, disposed of following the completion of testing, or disposed of after the retention period required by NCCR 11.070(5); and

(5) The name and cannabis establishment agent registration card number of the agent responsible for disposal.

A cannabis independent testing laboratory shall conduct quarterly physical verification of all cannabis and cannabis product material on premises, which shall include:

(1) A physical count and identification of all sample containers in the facility, including samples in storage, samples in active analysis, and samples retained pursuant to NCCR 11.070(5);

(2) Reconciliation of the physical count against the sample traceability records maintained pursuant to this subsection;

(3) Documentation and investigation of any discrepancy between the physical count and the traceability records; and

(4) The quarterly physical verification shall be performed by personnel independent of the day-to-day sample receipt, testing, and disposal process, or, if the size of the laboratory does not permit such independence, by the scientific director or a designee who shall attest to the accuracy of the verification in writing.

A cannabis independent testing laboratory shall maintain all records required by this subsection for a period of not less than 5 years after the date of the record and shall make such records available to the Board or Board Agents for review upon request.

If a cannabis independent testing laboratory identifies any cannabis or cannabis product material within its facility that cannot be traced to a registered sample record, or if any investigation pursuant to paragraph (e)(3) reveals an unexplained discrepancy, the cannabis independent testing laboratory shall:

(1) Determine the source and cause of the discrepancy and document corrective action taken;

(2) Report the discrepancy to the appropriate Board Agent within 24 hours of discovery if the discrepancy involves suspected criminal activity, diversion, or the presence of cannabis material of unknown origin; and

(3) If the discrepancy is due to suspected criminal activity by a cannabis establishment agent, report the cannabis establishment agent to the Board and to the appropriate law enforcement agencies within 24 hours, consistent with the requirements of subsection 9.

Nothing in this subsection shall be construed to require a cannabis independent testing laboratory to maintain a daily weight-based beginning-and-ending inventory of cannabis or cannabis products, or to account in real time for the incremental consumption of sample material during the course of active analytical testing. The purpose of this subsection is to ensure that all cannabis and cannabis product material within a testing laboratory is traceable to its source and that no cannabis or cannabis product of unknown or undocumented origin is present within the facility at any time.

Notwithstanding any other provision of this regulation, a cannabis independent testing laboratory may accept and perform testing on cannabis or a cannabis product submitted directly by an individual who is not acting on behalf of a cannabis establishment, provided that:

(1) The identity of the individual is confirmed by verification of a valid United States government-issued photographic identification document, including, without limitation, a driver's license or identification card issued by any state, a United States passport, or a United States military identification card;

(2) The individual is at least 21 years of age, or is the holder of a valid registry identification card or letter of approval issued pursuant to NRS 678C;

(3) The cannabis independent testing laboratory documents the name and date of birth of the individual, the type of identification document presented, and the date and time of submission;

(4) The cannabis independent testing laboratory assigns a unique sample identifier to the submitted material and maintains chain of custody documentation consistent with the requirements of NCCR 11.030;

(5) The results of any testing performed pursuant to this paragraph are reported to the individual and are clearly marked "INDIVIDUAL SUBMISSION — NOT FOR COMMERCIAL SALE OR TRANSFER" on each page of the report in 20-point bold red font;

(6) Any cannabis or cannabis product remaining after testing is completed is returned to the individual or destroyed by the cannabis independent testing laboratory with appropriate documentation pursuant to paragraph (d) of this subsection;

(7) Cannabis submitted by an individual pursuant to this paragraph is not subject to the seed-to-sale tracking requirements of NCCR 6.080 and 6.082, but the cannabis independent testing laboratory shall maintain records of all such submissions in its sample traceability system for a period of not less than 5 years and shall make such records available to the Board or Board Agents upon request; and

(8) A certificate of analysis issued pursuant to this paragraph shall not be used to satisfy the quality assurance testing requirements of NCCR 6.100 or NCCR 11.050 for any cannabis establishment.

11.4.6 Relationship to Existing NCCR Requirements

The proposed alternative subsection 12 builds upon and is consistent with existing requirements in NCCR 11.030 (chain of custody policies), NCCR 11.035 (records proving all cannabis is present for testing purposes only), NCCR 11.070(4) (disposal documentation in seed-to-sale system), and NCCR 6.082 (use of seed-to-sale tracking system). It converts the current patchwork of individual obligations into a unified, enforceable traceability standard while expressly preserving the operational exemptions that testing laboratories require.

The quarterly physical verification at paragraph (e) mirrors the existing requirement at subsection 8(c) applicable to other cannabis establishments, adapted for laboratory operations by requiring count-and-identify reconciliation rather than weight-based reconciliation. The explicit carve-out at paragraph (h) ensures that no future enforcement action could interpret this subsection as requiring the real-time weight tracking that the subsection 7 exemption was designed to prevent.

11.4.7 Interaction with SB 157 Sampling Framework

This provision has direct implications for the SB 157 sampling framework:

(a) Laboratories handling scaled composite samples (30g to 180g depending on lot size under revised NCCR 11.050) must have traceability systems capable of tracking variable-weight composites—not just fixed 60g amounts—through subdivision into testing, retesting, and retention aliquots;

(b) The proposed traceability framework's status categories (Awaiting analysis; In active analysis; Analysis complete, awaiting disposal or return; Retained; Designated for disposal) directly accommodate the three-part subdivision of composites under the SB 157 framework;

(c) The sample receipt and registration requirements at paragraph (a) must capture the lot size and corresponding composite weight collected under the scaled requirements of revised NCCR 11.050, creating a documented record linking each composite to the lot it represents;

(d) The proposed quarterly physical verification (count-and-identify rather than weigh-and-reconcile) properly accounts for the inherent sample consumption and destruction that occurs during analytical testing, while the 10% inventory variance threshold from NCCR 4.035(1)(b)(13) is inapplicable to a traceability-based system that measures discrepancies by sample count rather than weight.

11.4.8 Recommendation

The Board should replace NCCR 6.080(12) as currently drafted with the proposed Origin Traceability System language set forth in Section 11.4.5. This alternative:

(a) Resolves the internal contradiction between subsections 7 and 12;

(b) Closes the accountability gap that currently exempts laboratories from meaningful inventory controls;

(c) Establishes a bright-line rule that every gram of cannabis in a testing facility must have a documented pedigree;

(d) Provides an enforceable compliance standard that does not require the impossible (daily weight-based inventory during active analysis);

(e) Accommodates the scaled composite sample sizes required under the revised SB 157 testing framework; and

(f) Maintains the regulatory objective of preventing diversion while respecting the scientific and operational realities of analytical testing.

11.5 Administrative Hold Orders (NCCR 4.067)

Proposed Changes: The March 4 draft substantially revises NCCR 4.067, changing the hold order trigger from "fail to comply...or pose significant...risk" (disjunctive) to "fail to comply...and constitute a substantial hazard" (conjunctive, requiring both conditions). Additionally, the threshold language changes from "significant...health or safety risk" to "constitute a substantial hazard to the public health."

Laboratory-Relevant Triggers: NCCR 4.067(1)(b) now enumerates specific grounds for administrative holds, including: (1) Failure of laboratory testing; (2) Incomplete or lack of required laboratory testing; (4) Sale of cannabis products that have failed testing without board agent approval; and (8) Cannabis or cannabis products that are misbranded, adulterated, or dishonestly presented.

Analysis: The shift from disjunctive ("or") to conjunctive ("and") in the hold order trigger raises the standard for imposing holds—products must now both fail to comply with regulatory requirements AND constitute a substantial hazard to public health. This change could be interpreted to mean that a mere regulatory testing deficiency (e.g., incomplete testing) cannot alone trigger a hold order unless the Board also demonstrates a substantial public health hazard. While this higher threshold provides useful protection against arbitrary holds, it may also create enforcement gaps where products with incomplete testing are released before the public health impact can be established.

30-Day Expiration: The new 30-calendar-day hold order expiration (NCCR 4.067(2)) imposes a time constraint that interacts with laboratory retesting timelines. If a hold is placed due to failed testing and a retest is required under revised NCCR 11.050, the laboratory must be able to complete retesting within the 30-day window (or the hold must be extended by a hearing officer). The scaled sample sizes under the revised NCCR 11.050 provide dedicated retest aliquots (10g to 60g depending on lot size), which should facilitate timely retesting.

Recommendation: The Board should ensure that NCCR 4.067 hold order provisions reference the SB 157 testing framework explicitly, and that "failure of laboratory testing" and "incomplete or lack of required laboratory testing" are defined in relation to the scaled sample sizes and homogenization requirements of revised NCCR 11.050. Additionally, the 30-day hold expiration should include a specific provision tolling the period during laboratory retesting.

11.6 Suspension and Reinstatement Procedures (NCCR 4.105)

Proposed Change: The March 4 draft substantially revises NCCR 4.105, replacing the prior "summary suspension" framework with new suspension procedures referencing Assembly Bill No. 76 (2025). Key changes include: (a) replacing the Board-issued summary suspension with a Board Agent-issued suspension order; (b) replacing the plan of correction process with a reinspection/reinstatement process requiring a written emergency operating plan and proof of corrective action; (c) new hearing petition requirements with specific deadlines and evidentiary standards.

Laboratory Impact: For laboratories, the shift from a Board-level summary suspension to a Board Agent-issued suspension order potentially lowers the procedural threshold for suspending laboratory operations. The new requirement for a "written emergency operating plan" and "proof that immediate corrective action has been taken" before reinstatement may be particularly challenging for laboratories whose operations depend on equipment calibration, proficiency testing, and ISO/IEC 17025 accreditation maintenance—all of which may require more than the implicit short timeline for corrective action.

Recommendation: The Board should ensure that laboratory suspension and reinstatement procedures account for the unique operational requirements of ISO/IEC 17025-accredited testing laboratories, including the time required for equipment recalibration, proficiency testing, and accreditation body notification.

11.7 Prohibition on Lot Combining Before Testing (NCCR 6.100)

Proposed Change: NCCR 6.100 is revised to add "combine lots" to the existing prohibition, now reading: "A cannabis establishment shall not sell, combine lots, or transfer a lot of usable cannabis, concentrated cannabis or cannabis products until all required quality assurance testing has been completed."

Analysis: This addition is directly supportive of the SB 157 testing framework. By explicitly prohibiting lot combining before testing completion, the Board prevents cannabis establishments from aggregating smaller lots into larger ones to circumvent lot size limits and their associated sampling requirements. This provision reinforces the integrity of the lot-based sampling framework established under SB 157 Section 3(b) and the scaled sample size requirements recommended in revised NCCR 11.050.

Recommendation: This provision should be retained as proposed. The Board may also wish to add clarifying language specifying that lots may be combined after testing completion only if proper seed-to-sale documentation is maintained.

11.8 Training Requirements (NCCR 6.072)

Existing Language (NCCR 6.072(1), current): Subsection 1 currently requires all cannabis establishment agents to receive training before beginning work, limited to three categories: (a) proper use of security measures for prevention of diversion, theft, or loss; (b) procedures for responding to an emergency; and (c) state and federal statutes and regulations related to cannabis use.

Existing Language (NCCR 6.072(3), current): Subsection 3 adds laboratory-specific training requirements: instruction in (a) good laboratory practices adopted by the laboratory, and (b) standard operating procedures and quality control/quality assurance programs. This subsection is unchanged in the March 4 draft.

Proposed Changes (March 4 draft): The March 4 draft significantly expands subsection 1 while leaving subsection 3 unchanged. The key additions to subsection 1 are: (a) the concept of a "designated trainer" who must be authorized and deemed qualified by the cannabis establishment, and who must release agents from training before they may perform duties independently; (b) a training attestation documenting each agent's release from training; (c) two new training categories—seed-to-sale tracking system operation "in accordance with the Board's training requirements" (new 6.072(1)(d)) and procedures for proper handling of cannabis plants, usable cannabis, concentrated cannabis, and cannabis products (new 6.072(1)(e)); and (d) a blanket prohibition on any agent performing duties independently or without supervision of a designated trainer until released from training.

Laboratory Impact: Because subsection 1 applies to all cannabis establishments without exception, the new requirements in 6.072(1)(d) and (1)(e) apply to every cannabis establishment agent employed by or volunteering at a cannabis independent testing laboratory. In practice, however, the majority of laboratory personnel—bench chemists, microbiologists, instrument analysts, quality assurance officers—never interact with the seed-to-sale tracking system. In a typical testing laboratory, seed-to-sale system interaction is limited to a small number of personnel performing specific functions: sample receipt and registration, sample management and chain of custody transfers, disposal documentation, and certificate of analysis transmission. Requiring all laboratory agents to complete Board-prescribed seed-to-sale tracking system training imposes a training burden disproportionate to the actual operational need and diverts scientific personnel from the laboratory-specific training that directly affects testing quality and public health outcomes.

Concern — Blanket "No Independent Duties" Prohibition: The proposed language states that no agent "shall perform any duties independently or without the supervision of a designated trainer" until released from training. For a testing laboratory operating under ISO/IEC 17025 accreditation, scientific personnel are already subject to competency-based training, demonstrated proficiency, and ongoing supervision requirements under the laboratory's quality management system. The proposed blanket prohibition could be interpreted to prevent a newly hired chemist with years of analytical experience from performing any laboratory function—including instrument calibration, standard preparation, or data review—until a designated trainer has completed the full NCCR 6.072(1)(a) through (e) training sequence, even where the chemist will never interact with the seed-to-sale system. This creates an unnecessary operational disruption that does not advance regulatory objectives.

Recommendation: The Board should amend NCCR 6.072(1)(d) to limit the seed-to-sale tracking system training requirement to those cannabis establishment agents whose duties include interaction with the seed-to-sale tracking system. For cannabis independent testing laboratories, this means that seed-to-sale training under subsection 1(d) should be required only for laboratory personnel who perform sample receipt and registration, sample management and chain of custody documentation, disposal documentation in the seed-to-sale system, or certificate of analysis transmission—not for bench scientists, instrument analysts, or other laboratory personnel whose

duties are confined to analytical testing and do not involve seed-to-sale system access. Laboratories should update their training SOPs to identify which personnel positions require seed-to-sale training and to document the training attestation for those personnel accordingly. All laboratory agents should continue to receive the security, emergency response, and regulatory training required by subsections 1(a) through (c), and the laboratory-specific training required by subsection 3.

Proposed Alternative Language for NCCR 6.072(1)(d):

> *(d) For cannabis establishment agents whose duties include interaction with the seed-to-sale tracking system designated by the Board, training in the use and operation of that system in accordance with the Board's training requirements. A cannabis establishment may designate specific agent positions that require seed-to-sale tracking system training based on the agent's assigned duties, and shall maintain documentation of such designations. For a cannabis independent testing laboratory, the positions requiring seed-to-sale tracking system training shall include, at a minimum, agents responsible for sample receipt and registration, chain of custody documentation, disposal documentation, and certificate of analysis transmission.*

11.9 Waste Disposal Provisions (NCCR 10.080)

Proposed Changes: New NCCR 10.080(4)(a) through (d) establish tiered disposal requirements based on quantity thresholds (23,000 grams, 4,000 individual units, or 50 pounds), require surveillance camera documentation of all destruction activities, and exempt root balls from seed-to-sale tracking.

Laboratory Impact: While primarily aimed at cultivation and production facilities, these disposal provisions also apply to laboratory sample destruction. Laboratories routinely destroy tested samples and must ensure their disposal processes comply with the new documentation requirements, including time-stamped photographic evidence, surveillance camera coverage, and seed-to-sale system recording as required by the new laboratory inventory control provision (NCCR 6.080(12)).

Recommendation: The Board should clarify whether the quantity thresholds in NCCR 10.080(4)(a) apply to individual sample disposals or aggregate laboratory disposals, and should establish laboratory-specific disposal protocols that coordinate with the inventory control requirements of NCCR 6.080(12).

11.10 Packaging and Labeling Changes (NCCR 12.010)

Proposed Change: NCCR 12.010(1) increases the maximum THC per package for adult-use pills from 800 milligrams to 1,000 milligrams.

Laboratory Impact: This change affects laboratory potency testing and label verification. Laboratories performing potency testing on pill/capsule products must update their reporting thresholds and compliance verification procedures to reflect the new 1,000 mg per package maximum. Certificate of Analysis templates and seed-to-sale reporting parameters should be updated accordingly.

11.11 Early Case Conference Timeline (NCCR 4.095)

Proposed Change: The hearing deadline extends from 45 days to 120 days after receiving the respondent's answer, with provision for the parties to agree to further extensions with hearing officer approval.

Laboratory Impact: For laboratories involved in disciplinary proceedings, the extended timeline from 45 to 120 days provides more time for case preparation but also extends the period of uncertainty during which the laboratory may be operating under restrictions or with pending disciplinary action. Combined with the new administrative hold provisions (NCCR 4.067), a laboratory could face a 30-day product hold followed by up to 120 days of hearing proceedings, creating significant operational and financial burden.

11.12 Subpoena Authority (NCCR 4.130)

Proposed Change: Subpoena issuance authority transfers from the "executive assistant" to the "hearing officer."

Laboratory Impact: This is a procedural improvement that centralizes subpoena authority with the hearing officer presiding over the case, which should result in more consistent and judicially appropriate subpoena decisions. Laboratories may benefit from this change when seeking to compel production of records from cultivation or production facilities in disputes involving testing results.

PART XII: CROSS-WORKSHOP INTEGRATION: HOW GENERAL NCCR REVISIONS INTERACT WITH SB 157 TESTING FRAMEWORK

The March 3 and March 4 workshop proposals, while presented as separate proceedings, contain numerous provisions that interact with and affect each other. This section identifies the most critical cross-workshop interactions requiring coordinated regulatory treatment.

12.1 Inventory Control ↔ Scaled Sample Sizes

The new NCCR 6.080(12) laboratory inventory control requirement (March 4) as currently drafted is internally contradictory with NCCR 6.080(7)'s exemption and operationally impossible to implement (see Section 11.4). The proposed Origin Traceability System alternative resolves this contradiction while establishing meaningful laboratory accountability. Critically, the traceability system must be designed to accommodate the scaled sample sizes recommended under revised NCCR 11.050 (March 3). A laboratory receiving a 180-gram composite for a 15-pound lot must track that composite differently from a 30-gram composite for a sub-5-pound lot. The proposed traceability framework's sample receipt and registration requirements (paragraph (a)) capture the lot size and corresponding composite weight, while the status categories (paragraph (b)(5)) track subdivision into testing, retesting, and retention aliquots through analysis and disposal. The quarterly physical verification (paragraph (e)) uses count-and-identify reconciliation rather than

weight-based reconciliation, properly accounting for the dynamic, consumption-driven nature of laboratory sample inventory.

12.2 Administrative Holds ↔ Testing Framework

NCCR 4.067 (March 4) references "failure of laboratory testing" and "incomplete or lack of required laboratory testing" as hold triggers, but these terms are undefined. Under the revised SB 157 testing framework (March 3), "failure" and "completeness" must be assessed against the scaled sample sizes and proper homogenization requirements. A test performed on 20 grams from a 15-pound lot should be considered "incomplete" testing if the revised NCCR 11.050 requires 60 grams for the testing aliquot. The Board should define these terms in NCCR 4.067 by cross-reference to NCCR 11.050.

12.3 Violation Categories ↔ Laboratory Compliance

The restructured violation categories (March 4, NCCR 4.033–4.061) apply the same severity framework to all cannabis establishments, including laboratories. However, certain enumerated violations require laboratory-specific interpretation. The 10% inventory variance threshold (Category II, NCCR 4.035(1)(b)(13)) is designed for cultivation and production facilities where inventory is a raw material or finished product measured by weight. For laboratories operating under the proposed Origin Traceability System (Section 11.4.5), discrepancies are measured by sample count and identification rather than weight—a laboratory cannot have a meaningful "weight variance" when samples are being continuously consumed during analysis. The Board should clarify that the 10% inventory variance threshold does not apply to testing laboratories operating under the traceability framework, and that laboratory compliance is instead measured against the traceability requirements of proposed NCCR 6.080(12)(b) (origin traceability) and (e) (quarterly physical verification), with violations arising from untraceable material (paragraph (g)) rather than weight discrepancies.

12.4 Imminent Health Hazard ↔ Laboratory Operations

The broadened "imminent health hazard" definition in NCCR 1.110 (March 4) interacts with the NCCR 4.065 presumptive hazard list and laboratory operations. Of particular concern: NCCR 4.065(1)(a) lists "interruption of electrical service for 2 or more hours" as a presumptive imminent health hazard. For analytical laboratories, a 2-hour power interruption could affect instrument calibration, sample integrity, and ongoing analyses, but it does not necessarily create a "substantial hazard to the public health" in the way it would for a facility storing perishable cannabis products. The Board should establish laboratory-specific criteria for imminent health hazard determinations.

12.5 Training Requirements ↔ SB 157 Implementation

The expanded training requirements under NCCR 6.072 (March 4) should be coordinated with SB 157 implementation, with careful attention to the distinction between laboratory personnel who interact with the seed-to-sale tracking system and those whose duties are confined to analytical testing. As recommended in Section 11.8, the seed-to-sale training requirement in new subsection 1(d) should apply only to laboratory agents whose duties include system interaction—sample

receipt personnel, chain of custody administrators, disposal documenters, and COA transmitters—not to bench scientists and instrument analysts who perform the analytical work. However, laboratory agents performing sample collection under NCCR 11.070 necessarily interact with the seed-to-sale system and must be trained not only on system operation but also on the SB 157-specific protocols: scaled sample sizes, proper homogenization sequences, aseptic sampling techniques, and chain of custody documentation requirements. The Board should add SB 157 sampling-specific training requirements to NCCR 6.072(3) for laboratory agents involved in sample collection and management, while preserving the existing laboratory-specific training framework for analytical personnel.

12.6 Lot Combining Prohibition ↔ Lot Size Definitions

The NCCR 6.100 prohibition on lot combining before testing (March 4) directly reinforces the SB 157 lot size definitions in NCCR 1.125 (March 3). Together, these provisions create a coherent framework: NCCR 1.125 defines the maximum lot sizes, NCCR 6.100 prevents circumvention through aggregation, and revised NCCR 11.050 establishes the scaled sampling requirements for each lot size. All three provisions must be adopted in coordination to maintain the integrity of the testing system.

PART XIII: COMPREHENSIVE RECOMMENDATIONS FOR BOTH WORKSHOPS

13.1 Recommendations for the March 3 Workshop (SB 157 Provisions)

The recommendations in Parts II through X of this document remain fully applicable and are summarized in Part X. The most critical recommendations are:

(a) Implement scaled sample sizes maintaining 0.88% sampling rate (Part V);

(b) Mandate pre-subdivision homogenization (Part V);

(c) Adopt ASTM D8334-20 version-specifically with CCB precedence (Parts III, VII);

(d) Restore aseptic sampling requirements (Part VI);

(e) Restore lot size definitions consistent with SB 157 (Part II);

(f) Correct typographical errors (Part VI);

(g) Restore Section 61 adoption-by-reference framework (Part VII).

13.2 Recommendations for the March 4 Workshop (General Revisions)

(a) Laboratory Inventory Control (NCCR 6.080(12)): Replace the current subsection 12 with the proposed Origin Traceability System language set forth in Section 11.4.5 of this document. The current language contains an irreconcilable contradiction with the subsection 7 exemption and demands daily weight-based inventory that is operationally impossible during active analytical testing. The proposed alternative closes the accountability gap—ensuring every gram of cannabis

in a testing facility is traceable to its documented source—while accommodating variable composite sample sizes under revised NCCR 11.050 and using count-and-identify quarterly reconciliation rather than weight-based reconciliation. The 10% inventory variance threshold from NCCR 4.035(1)(b)(13) is inapplicable to the proposed traceability-based system and should not be applied to testing laboratories.

(b) Administrative Hold Orders (NCCR 4.067): Define "failure of laboratory testing" and "incomplete or lack of required laboratory testing" by cross-reference to the SB 157 testing framework (NCCR 11.050). Include a provision tolling the 30-day hold expiration during laboratory retesting.

(c) Imminent Health Hazard (NCCR 1.110): Add clarifying language that laboratory reporting of adverse test results does not itself constitute an imminent health hazard triggering laboratory suspension. Establish laboratory-specific criteria for imminent health hazard determinations under NCCR 4.065.

(d) Violation Categories (NCCR 4.033–4.061): Clarify that the 10% inventory variance threshold (Category II) does not apply to testing laboratories operating under the proposed Origin Traceability System, and that laboratory compliance is measured against traceability requirements (documented origin for all material, quarterly count-and-identify reconciliation) rather than weight-based variance. Establish that the "imminent threat to public health" trigger in NCCR 4.035(1)(b)(16) requires laboratory-specific interpretation accounting for the unique operational characteristics of analytical testing.

(e) Training (NCCR 6.072): Amend subsection 1(d) to limit seed-to-sale tracking system training to laboratory agents whose duties include interaction with the seed-to-sale system (sample receipt, chain of custody, disposal documentation, COA transmission), using the proposed alternative language set forth in Section 11.8. Bench scientists, instrument analysts, and other analytical personnel whose duties do not include seed-to-sale system access should not be required to complete Board-prescribed seed-to-sale training. Additionally, add SB 157-specific sampling training requirements to NCCR 6.072(3) for laboratory agents involved in sample collection and management, including scaled sample sizes, homogenization protocols, aseptic technique, and chain of custody documentation.

(f) Lot Combining Prohibition (NCCR 6.100): Retain as proposed; this provision directly supports the SB 157 testing framework. Consider adding clarifying language regarding post-testing lot combining with proper documentation.

(g) Suspension/Reinstatement (NCCR 4.105): Account for ISO/IEC 17025 accreditation requirements in laboratory reinstatement procedures, including the time needed for equipment recalibration, proficiency testing, and accreditation body notification.

(h) THC Package Limits (NCCR 12.010): Ensure laboratory potency testing protocols and COA templates are updated to reflect the new 1,000 mg per package maximum for adult-use pills.

13.3 Coordinated Implementation

The Board should adopt the March 3 and March 4 regulatory changes as a coordinated package, with explicit cross-references between the SB 157 testing provisions and the general regulatory

revisions that affect laboratory operations. Specifically, NCCR 6.080(12) should cross-reference NCCR 11.050 for sample size variability; NCCR 4.067 should cross-reference NCCR 11.050 for testing completeness definitions; and NCCR 6.072 should cross-reference the SB 157 sampling protocols for laboratory training requirements.

APPENDIX A: STATUTORY AND STANDARD REFERENCE CITATIONS

A.1 SB 157 Key Provisions

Section 3(2)(b): Collection of representative samples "in accordance with standards established by the Board, which must align with the most recent version of the ASTM International Standard ASTM D8334/8334M."

Section 3(2)(c): Establishes minimum sample weights using "not less than" language: 10g (<5 lbs), 15g (5–10 lbs), 20g (10–15 lbs).

Section 3(3)(b): Defines "Lot" as 15 pounds (flower), 45 pounds (trim), 150 pounds (wet material).

A.2 ASTM D8334/D8334M-20 Key Provisions

Section 1.2 (Jurisdictional Precedence): Local regulatory directives "shall take precedence" where they differ from the standard.

Section 4.2 (Batch Size Maximum): Maximum harvest batch weight of 6.8 kg (15 lb) unless local jurisdiction has alternative requirements.

Section 6.1.1 (Homogenization): All attempts to minimize inhomogeneity shall be practiced and documented.

Section 6.3.2 (Aseptic Techniques): Use of appropriate disinfected sampling equipment following aseptic sampling procedures.

Section 7.8.1 (Minimum Panel Weight): Recommends minimum weight of 20g for a lab panel.

Section 7.8.2 (Composite Sample): Composite sample of 60g (20g testing, 20g retesting, 20g retention).

Sections 7.10–7.11 (Sampling Schemes): Scheme A for flat containers ($T = \sqrt{n} + 1$); Scheme B for deep containers (per Table 2).

A.3 ASTM WK94344 (Active Revision)

Date Initiated: March 29, 2025 (48 hours after SB 157 passed Nevada Senate)

Technical Contact: Marie Duncan

Stated Rationale: "Revamping standard to make more appropriate for industry, align with global standards, and remove the 15lb max batch size."

Committee: D37 (Cannabis), Subcommittee D37.03 (Laboratory). Chair (2026–2027): David Vaillencourt.

A.4 Assembly Bill No. 76 (2025) Key Provisions

Section 15 (NRS 678A.520 amendments): Revised hearing procedures and timelines for disciplinary actions.

Section 17 (NRS 678A.540 amendments): Revised hearing conduct requirements.

Section 30: New operational suspension procedures authorizing Board Agent-issued suspension orders and establishing reinspection/reinstatement process.

A.5 R152-24, CCB Rev. 10/01/2025, Sections 61–73 (December 2025 Revision)

LCB File No.: R152-24

Revision Date: October 1, 2025 (distributed December 10, 2025)

Scope: Sections 61–73, amending NCCRs 11.025, 11.030, 11.050, 11.070, 11.075, and 11.085.

Key Feature: Expanded adoption by reference from approximately 4 ASTM standards to approximately 28 separate publications from ASTM International, AOAC International, ISO, FDA, USDA, WHO, OECD, and the American Herbal Pharmacopoeia. Restructured from targeted "adhere to" language to formal adoption-by-reference framework.

Critical Issues: Removal of conflict-resolution mechanism; ambiguous "June 20, 2024 version" date that does not match actual publication dates of adopted standards; wholesale mandatory ASTM D8334 adherence; nondelegation doctrine and NRS 233B concerns; "as received" definition conflict with required analytical sample preparation.

A.6 Review of R152-24

Title: Comprehensive Review and Suggested Revisions to the LCB Draft of Proposed Regulation R152-24, CCB Rev. 10/01/2025, Sections 61–73 (dated 12/10/2025)

Prepared: February 7, 2026

Scope: 15 items covering conflict resolution, periodic review and default-disapproval language, version pinning, nondelegation doctrine, wholesale ASTM D8334 incorporation, chain of custody, "as received" definition, sample size and 60-gram composite, typographical error (D88334M), "including but not limited to" scope problem, facility obligations, sample retention, lab retest prohibition, compliance check cost allocation, and ASTM "harvest batch" vs. NCCR "lot" terminology.

A.7 Vaillencourt/GTI LinkedIn Evidence (January 2026)

Source: Publicly available LinkedIn post by David Vaillencourt announcing his election as ASTM D37 Chair (posted approximately January 2026, identified as "1mo" at time of documentation).

Key Exchange: Kay Doyle (Senior Director, Government Affairs, Policy, Green Thumb Industries, April 2023 – November 2025) commented "Congratulations!!! What a great leadership team!"

Vaillencourt replied: "Kay Doyle thanks! I appreciate you and GTIs support getting standards moved forward into the marketplace."

Significance: Direct public acknowledgment of MSO government-affairs support for ASTM cannabis standards development by the newly elected ASTM D37 Chair, documenting the relationship between private standards development and MSO regulatory policy interests.

A.8 Constitutional and Legal References

Carter v. Carter Coal Co., 298 U.S. 238 (1936): Establishes the private nondelegation doctrine prohibiting delegation of governmental authority to private entities without adequate oversight.

Veeck v. Southern Building Code Congress Int'l, 293 F.3d 791 (5th Cir. 2002): When private standards are incorporated into law, due process requires public access.

NRS 233B.040: Nevada Administrative Procedure Act governing adoption of regulations and incorporation of external standards by reference.

NRS 678A.450: CCB authority to adopt regulations necessary to carry out cannabis provisions.

NRS 678A.470: Confidentiality provisions for personal information of persons who facilitate services pursuant to Title 56, with exceptions for governmental disclosure.

NRS 678B.050: Definition of excluded felony offenses relevant to new Category I violations.

March 2, 2026

Executive Director James Humm
Nevada Cannabis Control Board

As industry leaders in cannabis and pathogen genomics, we have spent decades working with quantitative polymerase chain reaction (qPCR) and culture-based methods for the detection of microorganisms. We are experts in the field with over 40 patents related to PCR and DNA sequencing based methods for detecting microorganisms. Kevin McKernan, Chief Scientific Officer at Medicinal Genomics Corporation (MGC) managed the Research and Development team for the Human Genome Project at the Whitehead Institute of MIT. He has over 58,853 citations related to his work in this field. Our scientists recommend microbial testing specifications that will ensure that medical cannabis plant material and manufactured products are safe for patients. Due to concerns for public health, the **Nevada Cannabis Compliance Board (CCB), which administers Nevada's adult-use and medical cannabis programs,** should draft proposed modified cannabis testing regulations, which include those to detect microbial contaminants that reflect ongoing efforts at AOAC International, ASTM International, the United States Pharmacopeia (USP), the Centers of Disease Control and Prevention (CDC), and the United States Food and Drug Administration (FDA) that are consistent with our findings at MGC.

The presence of microorganisms is common on plants, such as cannabis. One must be able to differentiate between harmless and/or beneficial microbes (bacteria, yeasts, and fungi) ubiquitous in nature and those that are human pathogens that have contaminated the cannabis plant material and/or manufactured products. Examples of pathogens that have caused human illness and even death affiliated with cannabis use are *Salmonella* species, Shiga toxin producing *E. coli* (STEC), *Aspergillus flavus, A. fumigatus*, *A. niger*, and *A. terreus* [1-33].

Current required tests for microbial contamination in states that have a medical and/or an adult-use cannabis program vary among the states. Some states require different combinations of total count tests, such as Total Yeast & Mold (TYM), Total Enterobacteriaceae (TE), and Total Coliforms (TC); as well as the six human pathogens listed above with various action levels for each test and each cannabis product type. On the other hand, other states, such as California, Montana, and Vermont only require tests for detecting the human pathogens *Salmonella* spp., STEC, *A. flavus*, *A. fumigatus*, *A. niger*, and *A. terreus* for inhalable products.
NOTE: Total count tests have action levels as colony forming units (cfu/g), which is the number of colonies that grow on the surface of an agar medium plate. Specific pathogen tests have an action level of "<1 cfu per 10 grams".

The current **Nevada** regulations — under **Nevada Administrative Code (NAC) Chapter 453D: Regulation and Taxation of Marijuana**, codified in the **Nevada Administrative Code** — were

adopted under Nevada's cannabis regulatory framework and are administered through Nevada's cannabis regulator, the **Nevada Cannabis Compliance Board (CCB)**. 34

Under **NAC 453D.780 — Required quality assurance tests; submission of wet marijuana for testing**, each marijuana testing facility must use the sampling protocols and the general body of required quality assurance tests for usable marijuana, concentrated marijuana, and marijuana products set forth in this section, including microbial screening.

Usable cannabis, infused pre-rolls and crude collected resins, as received, and wet cannabis, as received, which is destined for extraction	
Salmonella spp.	Not detected in 1 gram
Pathogenic E. coli	Not detected in 1 gram
Total Enterobacteriaceae	< 1,000 colony forming units per gram
Total Coliform	< 1,000 colony forming units per gram
Aspergillus A. flavus A. fumigatus A. niger A. terreus	Not detected in 1 gram
Total Yeast and Mold	< 10,000 colony forming units per gram

Extract of cannabis (nonsolvent) like hashish, bubble hash, infused dairy butter, mixtures of extracted products or oils or fats derived from natural sources, including concentrated cannabis extracted with ethanol or CO2; Extract of cannabis (solvent-based) made with any approved solvent, including concentrated cannabis extracted by means other than with ethanol or CO2	
Salmonella spp.	Not detected in 1 gram
Pathogenic E. coli	Not detected in 1 gram
Total Enterobacteriaceae	< 100 colony forming units per gram
Aspergillus A. flavus A. fumigatus A. niger A. terreus	Not detected in 1 gram
Total Yeast and Mold	< 1000 colony forming units per gram
Edible cannabis products, including a product which contains concentrated cannabis; and Liquid cannabis products, including, without limitation, soda or tonic, including a product which contains concentrated cannabis	

Total Enterobacteriaceae	< 1,000 colony forming units per gram
Salmonella spp.	Not Detected in 1 g
Pathogenic E. col	Not Detected in 1 g
Total aerobic count	< 100,000 colony forming units per gram

Nevada's current regulations already require testing to detect key human pathogens associated with cannabis use for inhalation-route products, including processed products such as flower and inhalable oils (e.g., products administered using a nebulizer or vape pen). Specifically, Nevada requires testing for **Salmonella spp.**, and the four pathogenic **Aspergillus** species (**A. flavus, A. fumigatus, A. niger, and A. terreus**) for relevant inhalable product categories. The United States Pharmacopeia (USP) has emphasized the importance of testing inhaled cannabis goods for these four pathogenic *Aspergillus* species, noting that when inhaled they can cause immune lung disorders ranging from asthma and hypersensitivity pneumonitis to invasive, life-threatening systemic infections in immunocompromised individuals. [35]

O**ur first recommendation for Nevada is** Shiga-toxin producing *Escherichia coli* (STEC) **must** replace pathogenic *E. coli*, because 1) STEC is the most pathogenic of the six pathotypes that has a minimum infection rate (MIR) of <10 cells, and 2) there is no test using any technology at this time that can detect and/or identify all six pathogenic *E. coli*. The action level should be modified to <1 CFU/10 grams. (see below for our reasons for this recommendation for the action level for all microbial pathogen detection in cannabis samples).

The number of states and territories that require microbial testing rules for inhaled cannabis products (flower, pre-rolls, vape pens, *etc*) was 25 in 2019 and 43 in 2025 [37] A comparative analysis of the required microbial testing rules for all jurisdictions with legal cannabis programs in 2019 and in 2026 showed that the percentage of states and territory that require the detection of the pathogens listed above has increased during this 6 year period (see the following table).

Microorganism (2019) # (%)		Microorganism (2025) # (%)		% Increase over 7 years
Salmonella species	22 (85%)	*Salmonella* species	41 (95%)	**10%**

STEC	4 (15%)	STEC	21 (49%)	**34%**
4 *Aspergillus* species	8 (30%)	4 *Aspergillus* species	25 (58%)	**28%**

Except for STEC detection, Nevada is already aligned with this pathogen-focused direction for inhalation-relevant product categories by requiring Salmonella spp., and the four pathogenic *Aspergillus* species. Accordingly, the key opportunity for Nevada is not expanding the pathogen list for inhaled products, but strengthening the program by aligning limits and implementation with a clinically relevant, pathogen-specific framework.

Our second recommendation is that total microbial count tests ("indicator tests"), such as, TYM,TE, and TC must not be required, because indicator tests do not directly test for pathogens. Total count tests do not provide pathogen-specific data relevant to cannabis safety. Relying on broad microbial counts provides no clear indication of human health risk.

Rationale for Second Recommendation

1. **Lack of Pathogen-Specific Data**

According to the American Herbal Pharmacopoeia's 2014 Monograph on Cannabis Inflorescence [38], total microbial count tests **should not** be used as a basis to fail cannabis samples simply for exceeding action levels. These tests, which include, TYM, TE , TC, and TAC do not differentiate between harmful and benign microorganisms. Therefore, a total count test result **provides no** information about the presence of human pathogens. Moreover, there are 35 microbiological pesticides that have been approved for cannabis cultivation by one or more states (MGC dataset). The primary ingredient in these microbiological pesticides is either a beneficial bacterial or fungal strain. These beneficial microorganisms prevent pest infection (bacterial, fungal, insect, and/or nematode cannabis pathogens) that could lead to reduction of cannabinoid yield or total crop loss. Required total count tests cause cultivators to use toxic chemical pesticides instead of harmless microbiological agents.

2. **No Link Between Total Count and Disease**

There are no peer-reviewed studies demonstrating that specific thresholds of total microbial counts (TYM, TE , TC, and TAC) are correlated with human disease. Without such research, it is scientifically unjustified to rely on these counts as criteria for failing cannabis samples.

3. **No Clinical Evidence from Cannabis Use**

To date, no clinical case studies have shown that total microbial counts (TYM, TE , TC, and TAC) on cannabis lead to human illness. The lack of such evidence further questions the relevance of these tests for ensuring public health safety.

4. **Failure to Satisfy Koch's Postulates**

Koch's Postulates, the gold standard for establishing a microorganism's role in causing disease, cannot be fulfilled by total count tests. These tests do not isolate or identify specific pathogens, but instead measure a broad and often harmless community of microorganisms. Without isolating disease-causing species, total counts cannot accurately assess the risk of human illness.

Therefore, the following modifications should be made to the above table:

For microbiological testing for inhalation-relevant categories already requiring pathogen testing in Nevada (usable marijuana/crude resins; wet marijuana destined for extraction; nonsolvent and solvent-based extracts)

	Standard
Shiga toxin producing strains of *Escherichia coli* and *Salmonella* species	< 1 CFU/10 grams
Aspergillus flavus	< 1 CFU/10 grams
Aspergillus fumigatus	< 1 CFU/10 grams
Aspergillus niger	< 1 CFU/10 grams
Aspergillus terreus	< 1 CFU/10 grams

NOTE: The action levels for all tests listed in the table above should be "< 1 CFU/10 grams" to allow for a sample size recommendation that follows.

For MICROBIOLOGICAL TESTING OF EDIBLE AND LIQUID MARIJUANA PRODUCTS

	Standard
Shiga toxin producing strains of *Escherichia coli*	< 1 CFU/10 grams

Salmonella species	< 1 CFU/10 grams
Listeria monocytogenes	< 1 CFU/10 grams

3. For MICROBIOLOGICAL TESTING OF INFUSED TOPICAL / INFUSED NON-EDIBLES

	Standard
Candida albicans	< 1 CFU/10 grams
Pseudomonas aeruginosa	< 1 CFU/10 grams
Streptococcus aureus	< 1 CFU/10 grams

Our third recommendation concerns the allowable methods to detect these recommended 10 human pathogens for the different sample types, which should be molecular detection. Nevada already requires marijuana testing facilities to use validated methods frameworks—including AOAC Official Methods/Performance Tested Methods (PTM), FDA BAM, ISO, USP, and USDA FSIS MLG (or an equivalent third-party validation study) when available, and provides an approval pathway for alternative methods when such validated methods are not available. In light of advancements in laboratory technology and the critical need for accurate and timely pathogen detection, MGC recommends that the Cannabis Control Board allow molecular testing methods, such as qPCR and other DNA-based assays, as validated technologies for specific cannabis pathogen testing.

Molecular methods offer significant advantages over traditional agar plating, which includes greater specificity & sensitivity for detecting clinically relevant pathogens, such as *Salmonella* spp., Shiga toxin–producing *E. coli* (STEC), and the four pathogenic *Aspergillus* species (A. flavus, A. fumigatus, A. niger, and A. terreus). These methods can provide results in hours rather than days, enhancing safety by enabling faster decision-making in product release, and reducing the risk of contaminated products reaching consumers. The adoption of molecular methods will align Cannabis Control Board's cannabis testing regulations with those in other highly regulated

industries, such as food and pharmaceuticals, which already leverage these tools to ensure product safety. By allowing for molecular testing, Nevada can strengthen its public health protections, support innovation in its testing labs, and streamline the regulatory compliance process for cannabis producers and testing facilities.

Most importantly, there are multiple AOAC certified Performance Tested Methods (PTMs) using cannabis as a sample type that are being used by licensed cannabis labs throughout the world. These PTMs were developed by the AOAC Cannabis Analytical Science Program (CASP), which is a forum where the science of cannabis analysis can be discussed and cannabis standards and methods developed. To date, AOAC has released three (3) Standard Method Performance Requirements (SMPRs) for the six human pathogens that we have recommended for testing (see #1-3 below).

1. Detection of *Aspergillus* in Cannabis and Cannabis Products
   https://www.aoac.org/wp-content/uploads/2019/10/SMPR-2019_001.pdf
2. Detection of *Salmonella* species in Cannabis and Cannabis Products
   https://www.aoac.org/wp-content/uploads/2020/07/SMPR-2020_002.pdf
3. Detection of Shiga toxin-producing *Escherichia coli* in Cannabis and Cannabis Products
   https://www.aoac.org/wp-content/uploads/2021/02/SMPR-2020_012.pdf
   NOTE: A SMPR for Detection of *Listeria monocytogenes* in Cannabis Edible Products will be approved in 2025.

Medicinal Genomics is a member of **AOAC's CASP Microbial Contaminants Working Group**. The goal and objectives of this working group are to:

- Develop Standard Method Performance Requirements (SMPR) for cannabis and hemp
- Extend a Call for Methods for each of the completed SMPRs
- Empanel an Expert Review Panel to review candidate methods
- Deliver consensus-based validated Performance Test Methods (PTMs) & Final Action Official Methods for the cannabis industry

Medicinal Genomics has a single AOAC Certified **qPCR** PTM for the detection of the 4 pathogenic *Aspergillus* species in one test and has a single AOAC Certified **qPCR** PTM for the detection of *Salmonella* spp. & STEC in one test. The sample types for the 4 *Aspergillus* species test are flower, infused products, oils & concentrates, and hemp. Moreover, the sample types for the Sal/STEC test are flowers, oils, chocolates, and hemp. Each of these two **multiplex qPCR assays** were validated by an independent 3rd party cannabis testing laboratory using the various cannabis sample

There are several **major disadvantages** of using plating methods to detect specific bacterial and fungal pathogens:

- Cannabinoids, which can represent up to 30% of a cannabis flower's weight, have been shown to have antibiotic activity. Antibiotics inhibit the growth of bacteria. *Salmonella* & STEC bacteria are very sensitive to antibiotics, which may lead to a false negative result using a plating system *vs.* a positive result using a qPCR method. [40-41]

- The USP stated "Detection of pathogenic *Aspergillus* species using culture based methods is very difficult, requiring a highly trained and experienced mycologist to correctly identify these pathogens by colony appearance and morphology, as there are many nonpathogenic species of *Aspergillus* that may be indistinguishable from those that are pathogenic [35].
- Agar plating methods cannot detect bacterial and fungal endophytes [42-43] that live a part or all of their life cycle **inside** a plant. Examples of endophytes are the *Aspergillus* pathogens. Methods to break open the plant cells to access these endophytes for plating methods also lyses these bacterial and mold cells (killing these cells in the process). Therefore, these endophytes will never form colonies, which will lead to a false negative result using a plating system *vs.* a positive result using a qPCR method.
- Selective media for mold plating methods, such as Dichloran Rose-Bengal Chloramphenicol (DRBC) reduces mold growth; especially *Aspergillus* by 5-fold. This may lead to a false negative result for this human pathogen. In other words, although DRBC medium is typically used to reduce bacteria; it comes at the cost of missing 5 fold more yeast and molds than Potato Dextrose Agar (PDA) + Chloramphenicol or molecular methods. These observations were derived from study results of the AOAC emergency response validation [44].

Therefore, a rule must be adopted that reads:
An AOAC Certified Performance Tested Method (PTM) that has an enrichment step with a minimum of sixteen hours (16 hrs) of incubation.

Our fourth recommendation is to add a regulatory sampling subsection that more clearly defines maximum lot/batch sizes for compliance and/or retention testing and strengthens representative composite sampling requirements for microbiological testing. NAC 453D.780 establishes minimum sampling requirements— including that a sample of usable marijuana must be at least 10 grams, that a sample of a production run must be the lesser of 1% of the total product weight or 25 units, and that all samples must be homogenized before testing. However, NAC 453D.780 does not, in this section, establish a specific maximum lot/batch size for microbiological compliance testing, and "sampling protocols" are defined as procedures specified by the CCB. Because microbial contaminants may be heterogeneously distributed within a lot/batch, clearer requirements for composite sampling across multiple locations and explicit lot/batch-size limits would reduce sampling bias and improve the likelihood of detecting localized contamination. Nevada has also been actively considering lot-size issues through workshops and public comment, which demonstrates that this is a current policy area appropriate for clarification in regulation.

Contaminants like pathogenic bacteria or fungi are often **heterogeneously distributed** within a batch. Even where Nevada requires a minimum sample size (e.g., at least 10 grams for usable marijuana) and homogenization, a sample that is not collected as a representative composite from multiple locations within a large lot/batch can still miss localized contamination. Therefore, MGC recommends that Nevada codify a sampling subsection that (i) establishes an explicit

maximum lot/batch size for microbiological compliance and/or retention testing, and (ii) requires a representative composite sample drawn from multiple locations within the lot/batch (and then homogenized) so the analytical portion more reliably reflects the entire lot and reduces the chance of missing clinically significant contamination.

Our fifth recommendation is:
Implement changes in Phases : Nevada already requires species-specific pathogen testing for key inhalation-relevant categories (including Salmonella, pathogenic E. coli, and the four pathogenic Aspergillus species) under NAC 453D.780. Accordingly, for any proposed enhancements to Nevada's microbial program—such as revising analytical portions and action levels, refining sampling/lot-size requirements, adding edible-specific pathogens where appropriate, or clarifying allowable validated molecular methods—MGC recommends a phased implementation approach to ensure accuracy, minimize disruption to the cannabis industry, and allow sufficient time for assay development, method verification/validation, laboratory competency, and regulator/lab guidance updates.

A phased strategy supports consumer safety by ensuring that any strengthened pathogen-focused requirements are implemented with clear technical expectations (e.g., analytical portion, detection limits, validated methods) and consistent laboratory performance, rather than forcing immediate operational changes that can increase variability or retesting burdens. Nevada has also been actively considering laboratory and lot-size related regulatory updates through workshops and formal rulemaking activities, reinforcing that staged implementation is appropriate when updating core testing requirements.

Phase 2 - Future Considerations - The following pathogens have been found on cannabis and known to cause clinical harm.

1. *Fusarium falciforme* - Kannapedia.net (https://kannapedia.net/) and References [45-50]; Fusariosis, Skin Infections, Pulmonary Infections, Disseminated Infections, mycotoxins - References [45-46, 51-56]]
2. *Fusarium proliferatum* - Kannapedia.net, References [45-50]; Fusariosis, Keratomycosis, Sinusitis, Onychomycosis, Pulmonary Infections, Systemic Infections - References [45-46, 51-56]
3. *Fusarium solani* - Kannapedia.net, References 45-50, 57]; Keratitis, sinusitis, endophthalmitis, onychomycosis, cutaneous infections, mycetoma and arthritis, organ membrane disruption - References [45-46, 51-56]
4. *Fusarium oxysporum* - Kannapedia.net, References [45-50, 57 ; Keratitis & onychomycosis in both immunocompetent and immunocompromised - References [45-46, 51-56]

5. *Mucor circinelloides* - Reference [57]; Pulmonary, Cutaneous, Rhinocerebral, Gastrointestinal & Disseminated Mucormycosis - References [58-59
6. *Mucor racemosus* - References [57] ; Pulmonary, Cutaneous, Rhinocerebral, Gastrointestinal & Disseminated Mucormycosis References [58-59]
7. *Penicillium citrinum* - Kannapedi.net, References [45, 54-55, 57]; Hypersensitivity Pneumonitis, mycotoxins, Severe Asthma with fungal sensitization, Occupational Lung disease, mycotoxins, particularly citrinin. Citrinin is a nephrotoxic compound, meaning it can damage the kidneys when ingested. Reference [45-46, 50, 56, 58, 60]
8. *Penicillium expansum* - Kannapedia.net, References[45, 55, 57]; Mycotoxins, particularly patulin, which is harmful if ingested. Patulin is known to cause a variety of adverse health effects, including nausea, gastrointestinal disturbances, and immune suppression. References [45-46, 56, 58]
9. *Penicillium marneffei* - Kannapedia.net, References [44, 54]; Skin lesions, fungemia, pulmonary lesions, anemia. Typically impacts individuals with HIV, hematological malignancies, and immunosuppressive agents. It is the only species in the Penicillium genus known to cause systemic infections in humans - References [45-46,56, 58, 60]
10. *Candida albicans* - Kannapedia.net; Oropharyngeal candidiasis (oral thrush): Common in those with HIV/AIDS, Vulvovaginal candidiasis (vaginal thrush), Candidemia/disseminated infections, Pneumonia, Meningitis, paronychia, onychomycosis, endocarditis, eye infection, and intertriginous candidiasis - Reference [61]

If you or other Cannabis Compliance Board members have any questions, please feel free to contact me.

I thank you for your time and consideration. Respectfully,

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Dr. Sherman Hom - Cannabis Industry Experience

In 2012 at the New Jersey Department of Health, Division of Public Health and Environmental Laboratories, Dr. Hom was the Project Manager that led a team of expert analytical chemists that started the first Cannabis Testing Laboratory in support of the State's Medical Cannabis Program. The team validated methods for the quantitation of eight (8) cannabinoids using HPLC UV-DAD, various heavy metals using ICP-MS, and various aflatoxins & ochratoxin A using affinity chromatography & HPLC MS.

From 2019 to 2021, Sherman was the Project Manager of a team that started the Cannabis Microbial Testing Lab and validated qPCR methods to detect shiga toxin producing *E. coli* (STEC), *Salmonella* spp., and the four human pathogenic species of *Aspergillus* (*A. flavus, A. fumigatus, A. niger,* and A. *terreus*).

From 2017 to 2021, he led a team that created the first continuously updated Medical Cannabis Testing Regulations by State. Comparative analyses were performed to make general observations and identify gaps & trends in the testing rules. For example in 2019, a literature search identified 25 chemical pesticides that were detected in a cannabis marketed product. Of these 25 pesticides, nine pesticides were not required to be tested by any state, while the other sixteen pesticides were required to be tested by various fractions of the states. Moreover in 2019, sixteen (16) of 27 states (59%) had a unique set of microbial testing regulations.

Since May 2021, Dr. Hom has been the Director of Regulatory Affairs at Medicinal Genomics Corporation (MGC), which markets genetics-based cannabis tests and breeding technologies. His primary responsibility is to make recommendations concerning microbial contamination testing and other related testing regulations to US state, Washington D.C., US territory, tribal nations within US borders, and country regulatory and legislative officials that are tasked with either drafting and/or modifying cannabis, hemp, and psychedelic mushroom regulations and bills to ensure safe products for patients and consumers. Approximately 75% of the US jurisdictions have partially or fully adopted MGC's cannabis microbial contamination testing regulations based on scientific principles.

Another major task is to continuously update MGC's Cannabis Microbial Testing Regulations by US State, Washington D.C., Territory, and tribal nations. (https://www.medicinalgenomics.com/cannabis-microbial-testing-regulations-by-state/). Comparative analyses of the microbial testing rules for the cannabis product types (plant material, concentrates, edibles, and infused-products non-edible) by state have been performed to provide information concerning general observations, identify gaps, and trends over the previous 7 years.

A third task is the creation of cannabis standards. Sherman supports the AOAC's Cannabis Analytical Science Program (CASP), the National Cannabis Laboratory Council, ASTM International D37.03 Cannabis Committee's Laboratory Subcommittee and the Association of Food and Drug Officials Cannabis, Hemp, and Natural Medicine's Committee.

Dr. Hom is the microbial contamination testing subject matter expert for the One Plant Policy Team that is drafting a whitepaper for cannabis policy standardization for the United States and other interested countries.

Lastly, Sherman has proposed next steps in providing the genomic data from cannabis flower microbiome research study to support a panel of national, regional, state, or country subject matter experts in various fields to engage in a dialogue to propose a consensus set(s) of cannabis microbial contaminant testing rules. The technology to obtain this genomic data has been developed by the MGC R&D team.

He has a B.A. in Biology from the University of California at San Diego, a Ph.D. in Microbiology from University of California at Davis, and was a Postdoctoral Fellow in Molecular Microbiology at the Department of Biology, The John Hopkins University (Baltimore, MD).

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March 2, 2026

Re: Revised Regulations to NCCR 1, 10, and 11

Chair and Members of the Board,

SB 157 was introduced, debated, and passed with a specific and limited purpose: to address cannabis lot sizes. The central policy discussion throughout the legislative process was whether Nevada should move from 5-pound lots to 15-pound lots for flower, and how that adjustment would impact efficiency, cost structure, and market stability. That was the issue before the Legislature. That was the issue stakeholders engaged on. And that is the issue many of us were told would be the focus of this workshop process.

We were promised a workshop to discuss lot sizes. The understanding was that the regulatory process would focus on implementing the statutory change expanding allowable lot sizes to 15 pounds, consistent with SB 157. Instead, the current proposal reaches far beyond that narrow objective and introduces a series of additional structural changes that were not the subject of the bill's central debate. Whatever views may exist on those additional provisions, they were not the focus of SB 157, and they were not the focus of the conversations that led to its passage.

The original intent of SB 157 was straightforward: adjust lot size limits. The statute itself reflects that targeted purpose. It amended the law to allow larger lots and established the associated sampling thresholds tied to those lot sizes. It did not direct a comprehensive restructuring of reporting requirements, documentation frameworks, or broader regulatory architecture. When a bill is narrowly crafted and debated around a single operational change, the implementing regulation should reflect that same discipline.

Workshops are intended to provide clarity and transparency around how a specific statutory change will be implemented. In this case, stakeholders were told that a workshop would address lot sizes. The expectation was that the Board would engage on how to operationalize 15-pound lots within the existing regulatory structure. When a workshop that was described as focusing on lot sizes instead becomes a vehicle for broader regulatory expansion, it undermines predictability and dilutes the purpose of the process.

The cleanest and most faithful way to implement SB 157 is to adopt a regulation that simply updates the existing framework to reflect the new 15-pound lot limit. That means amending the relevant sections of NCCR to conform to the statutory lot size change and ensuring internal consistency across the regulations. It does not require layering in additional structural revisions that extend beyond the bill's scope.

The Board has the discretion to keep this rulemaking tightly aligned with legislative intent. Doing so would provide regulatory certainty and demonstrate respect for the limited nature of the change enacted by the Legislature. Expanding the rulemaking beyond lot size implementation risks conflating separate policy questions and introducing complexity that was neither debated nor resolved during the session.

We therefore urge the Board to refocus this regulation on what SB 157 was designed to accomplish: increasing allowable lot sizes from 5 pounds to 15 pounds and harmonizing the regulations accordingly. A clean regulation that implements that specific statutory change, without adding unrelated or additional regulatory elements, would honor the original intent of the bill and the expectations set during the workshop process.

Sincerely,

Will Adler
Principal
Silver State Government Relations
Representing GTI Nevada