PHYSICAL STATE COMPLIANCE MANDATE v1.0

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1. Purpose of Publication

This document publishes a standard for independent verification that a high-density compute asset did not enter defined excluded physical operating states during a specified operating interval.

The standard is made publicly available for reference or adoption by any party, at their sole discretion.

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2. Scope and Independence

This standard applies to compute infrastructure operating at densities where physical operating conditions may have material implications for asset integrity, insurability, or post-operation assessment.

QH8 is not a manufacturer of hardware, a provider of cooling systems, a system integrator, or an operational service provider.

This standard does not:

- modify vendor-supplied systems,
- require disclosure of proprietary implementations,
- replace existing monitoring or control mechanisms.

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3. Core Deliverable: Sovereign Receipt

The Sovereign Receipt is a time-indexed, cryptographically signed, independently verifiable attestation that a compute asset did not enter any excluded physical operating state during a defined interval.

The Sovereign Receipt is:

- mechanism-agnostic,
- independent of any specific technical implementation,
- intended solely for use in audit, insurance evaluation, warranty assessment, and liability proceedings.

No additional products, services, guarantees, or performance claims are offered or implied.

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4. Problem Context

In high-density compute environments, certain physical operating regimes may be associated with cumulative degradation that:

- may not be reliably observable during routine operation, and
- may become subject to dispute after the fact.

Such regimes are frequently excluded, conditioned, or repriced within insurance and warranty frameworks due to lack of independent verification of non-entry.

No universally accepted, vendor-independent standard currently exists to provide such verification post-operation.

This document publishes one such standard.

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5. Governance Principle

Reactive systems respond after a condition is exceeded.
Observational systems record conditions after occurrence.

This standard defines exclusion of specified physical operating states as a matter of compliance governance, independent of implementation method.

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6. Excluded Physical Operating Regimes

Under version 1.0, the following categories of physical operating regimes are defined as excluded:

- regimes associated with irreversible material stress accumulation,
- regimes associated with uncontrolled transient energy conditions,
- regimes associated with long-term asset integrity compromise.

These categories are published as part of the standard.

No implementation mechanism, detection method, or enforcement pathway is disclosed or implied.

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7. Evidence Requirement

Alignment with this standard requires independent, verifiable evidence that none of the excluded regimes were entered during the operating interval under review.

The Sovereign Receipt constitutes one form of such evidence.

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8. Independent Registry Role

Self-certification by asset manufacturers, operators, or infrastructure providers constitutes a structural conflict of interest.

An independent registry is required to act as a neutral source of verification.

QH8 operates as such a registry for the purposes of this standard.

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9. Insurability and Liability Context

Where insurance coverage is narrowed, conditioned, or repriced due to inability to independently verify avoidance of degradation-associated regimes, the Sovereign Receipt may serve as admissible evidence within existing policy and actuarial frameworks.

This document makes no representation regarding coverage decisions.

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10. Intended Users of the Standard

This standard is published for parties that retain residual risk exposure, including:

- hardware lessors and asset financiers,
- regulated or sovereign compute infrastructure operators,
- infrastructure owners subject to third-party audit or duty-of-care obligations.

Applicability is determined solely by the party referencing the standard.

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11. Absence of Evidence

Operation of a compute asset without independently verifiable evidence of compliance with the published excluded-regime definitions may result in:

- retained liability in warranty or damage proceedings,
- reduced resale or collateral confidence,
- inability to satisfy certain insurance, audit, or regulatory requirements.

These outcomes reflect the absence of evidence, not a determination of fault or failure.

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12. Ledger and Verification Design

The registry ledger contains only:

- time-indexed attestations,
- cryptographic signatures,
- references to the published excluded-regime definitions.

The ledger is structured for independent verification and admissibility in legal, insurance, and audit contexts.

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13. Version Control

This document constitutes release of Minimum Viable Standard v1.0.

Version 1.0 defines:

- excluded physical operating regime categories,
- required evidentiary form,
- verification protocol.

All revisions are issued through formally versioned publications.
Previously issued attestations are not retroactively modified.

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14. Contact

Parties seeking independent verification under this standard may use the contact mechanism published on the official QH8 website.