

VBILL

Multi-Chain Public-Deployment Security Assessment

VanEck Treasury Fund Ltd.
Evidence-bound review of the Ethereum, BNB Chain, Avalanche and Solana
deployments

REPORT	B3-VBILL-2026-001
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BASELINE	Technical evidence through 29 September 2026; public product/RWA evidence through 30 September 2026
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B3-VBILL-O02 is one confirmed role-gated implementation defect: an authorized Omnibus issue/burn round trip leaves four counters inflated and emits positive burn deltas. Authorized reachability is established; severity remains unassigned because reliance on the affected counters, configured limits and resulting production impact are not sufficiently evidenced. Three control observations and the stated evidence limitations remain.

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Assessment of the official VBILL deployment roster, identified EVM and Solana control surfaces, recorded local validation and public product evidence. Scope and exclusions are defined in Section 2.

1 Executive Summary

bench3.ai assessed the publicly identified VBILL token, onboarding, compliance, Omnibus, bridge and Solana control surfaces. The production roster comprised native token ledgers on Ethereum, BNB Chain, Avalanche and Solana; the advertised EVM bridge was also reviewed at current fixed observations. [E01-E05]

Assessment conclusion

B3-VBILL-O02 is a confirmed role-gated implementation defect: an authorized Omnibus issue/burn round trip restores balance and total supply but leaves four aggregate counters inflated and emits positive burn deltas. Authorized reachability is established; severity remains unassigned because reliance on the affected counters, configured limits and resulting production impact are not sufficiently evidenced. The Ethereum onramp, current disabled EVM bridge route and sampled Solana paths otherwise produced the bounded results described below. [E02-E05]

Classification	Recorded result
Severity-assigned vulnerabilities	Critical 0 High 0 Medium 0 Low 0
Confirmed implementation defects	1; B3-VBILL-O02, role-gated; realistic impact insufficiently established for severity assignment
Control observations	3; NAV-policy boundary, disabled advertised EVM bridge, Solana authority concentration
Material limitations	Private NAV, bridge/reconciliation, Omnibus and redemption workflows; exact Solana deployed-build provenance

Material residual risk

The EVM NAV dependency enforces a public 30-hour technical maximum, but public evidence does not establish that 30 hours is the fund's authoritative business-validity window. This is an absent business invariant, not evidence of a stale-NAV exploit or proof that every value younger than 30 hours is economically acceptable. [E02-E03; B3-VBILL-O01; L01]

A production-shaped local fork confirmed that an authorized Omnibus bulk burn restores token balance and total supply but does not decrease four aggregate counters and emits positive burn deltas. The path was reached with the existing MASTER(1) address at the archived BNB fork, while no ordinary-holder path was established. At the recorded points the Omnibus wallet had zero balance and no Registry binding; no Omnibus TBE events were recovered from the bounded indexed Ethereum/Avalanche history. BNB and private production use and material economic impact were not established. The defect is reported separately from the three control observations, and severity remains unassigned because production reliance on the affected counters and resulting impact are not sufficiently evidenced. [E02-E03; B3-VBILL-O02]

On Solana, mint, freeze, permanent-delegate, transfer-hook, metadata and mint-close powers converge on program-derived controls governed by role accounts, while all five issuer programs share one direct upgrade-authority pubkey. Public repositories explain the architecture but do not reproduce the current deployed ELF hashes. The resulting binary and key-custody boundaries materially limit assurance. [E05; B3-VBILL-O04]

2 Scope and Assessment Basis

2.1 Official deployment baseline

Network	Official VBILL identity	Observation basis
Ethereum (1)	Token 0x2255718832bC9fD3bE1CaF75084F4803DA14FF01 Bridge 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE	Read-only state near blocks 26,077,464-26,077,659; issuer feed observed 29 September 2026.
BNB Chain (56)	Token 0x14d72634328C4D03bBA184A48081Df65F1911279 Bridge 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE	Read-only state near blocks 124,565,578-124,570,474; local validation pinned block 124,571,768.
Avalanche C-Chain (43114)	Token 0x7F4546eF315Efc65336187Fe3765ea779Ac90183 Bridge 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE	Read-only state near blocks 96,338,110-96,339,312.
Solana mainnet-beta	Mint 34mJztT9am2jybSukvjNqRjgJBZqHJsHnivArx1P4xy1	Finalized slots 451,404,408-451,416,171; mint slot 451,416,167 at 28 September 2026 19:42:33 UTC.

The official Securitize asset feed response retained by the workpapers had SHA-256 2b4388684d367e57d7cd89eb83622f352b6b51d637ecda0ee1f5e21418dc4e56. It identifies six-decimal native tokens on all four networks, the common EVM bridge and relayer configuration, and the Ethereum onramp. The Solana row contains no bridge address, relayer or Wormhole chain ID. [E02, E05; S01]

2.2 Included components

Scope element	Extent of assessment
Ethereum onboarding and NAV	SecuritizeOnRamp proxy, direct USDC/custodian branch, recursively resolved NAV and RedStone price-feed implementations, initialization and public 30-hour freshness bound.
EVM token services	Official token identities; service IDs 4, 256 and 2048; TrustService roles; Registry overwrite behavior; configuration; Omnibus controller; bridge initialization, peers and authority.
Solana token/control surface	Mint, Token-2022 extensions, RBAC, Asset Controller, Policy Engine, Identity Registry, redemption wallet, representative mint/transfer/burn routes, ProgramData and upgrade authority.
RWA/public evidence	Official product and deployment materials, regulatory filing and public supply observations. Private PPM, legal register, portfolio and custody records were not available.

2.3 Methods and exclusions

Methods comprised retained exact/normalized source-runtime review, EIP-1967 and ProgramData resolution, fixed-block/finalized read-only observations, historical transaction analysis, one localhost-only BNB validation of the Omnibus state transition, a read-only Solana assertion harness, and targeted bridge control/economic assessment. No production transaction was signed or broadcast. [E02-E05]

Excluded are the private NAV policy, PPM, transfer-agent register, Omnibus operating procedures, bridge recovery/reconciliation rules, cash-settlement records, key custody and organizational approvals. Public Solana source and IDLs were architectural aids only: no exact source, toolchain or reproducible build for the five deployed issuer ELF binaries was available. [E05-E06]

3 System and Threat Model

VBILL is a permissioned fund token represented on four native ledgers. Ethereum includes a USDC onboarding contract and public NAV stack. The three EVM tokens expose Securitize compliance and service modules; an advertised Wormhole-based bridge can burn on a source chain and issue on a destination only when it holds the required token and Registry authority. Solana uses Token-2022 with an RBAC-controlled Asset Controller, transfer-hook Policy Engine and Identity Registry; no Solana bridge binding was present in the official feed. [E02-E05]

Actor / layer	Authority	Boundary considered
Qualified holder	Hold and transfer eligible VBILL; use active onboarding/redemption channels.	Cannot obtain issuer, transfer-agent or Solana RBAC powers by holding tokens.
Issuer / transfer agent	Issue, burn/revoke, administer identity/compliance, perform corrections and private settlement.	Authorized powers are trust dependencies; their private procedures were not assessed.
Bridge / relayer	Asynchronous EVM burn, authenticated delivery and destination issue when authorized.	At the recorded heads the bridge had role 0 and could not burn, update Registry state or issue.
Solana MASTER / ISSUER / TRANSFER_AGENT	Administer roles, mint, freeze/thaw, burn, change policy/identity state and exercise permanent-delegate powers according to role masks.	Program-derived authorities prevent ordinary signatures; role-key and upgrade-key custody remain private.
Fund/administrator/custodian	Maintain the legal register, NAV, portfolio, liabilities and cash settlement.	Public token balances are not a contemporaneous legal-share or custody attestation.

3.1 Security objectives

The assessment examined paid issuance, identity and role authorization, initialization, current bridge reachability, authenticated peer and replay controls, raw-unit consistency, Omnibus accounting, Solana mint/freeze/burn authority, and whether public evidence supports the claimed business and multi-chain invariants.

4 Technical Assessment

4.1 Ethereum onboarding and NAV boundary

The current Ethereum onramp proxy is 0x488EFd3eD474b205A0AaDe3732E4741432cba50B. Its current configuration sets USDCBridge and bridgeChainId to zero and custodian to 0x8114d1FF41590bF796B3500aCDF8E1b0Bc246799. The direct execution branch transfers USDC to the custodian before delivering VBILL in the same transaction. The prior source-success/destination-failure hypothesis therefore does not apply to the recorded deployment. [E02-E03]

The recursively resolved NAV proxy 0x323E02E92924eB921D1904567690A813249eB819 and price-feed proxy 0xA569E68B5D110F2A255482c2997DFDBe1b2ab912 select exact-matched implementations. The deployed RedStone adapter rejects values whose last block timestamp is 30 hours old or more. This refutes an absolute absence of freshness validation. It does not prove that the fund's private NAV-validity or market-window policy permits every value younger than 30 hours. [E02-E03; B3-VBILL-O01]

4.2 EVM token services and Omnibus accounting

Network	Registry / configuration / Omnibus service	Recorded role state
Ethereum	0x897e452425bd1c860d7F9bc14eA045cBbC0fA0d4 0xF2afc03c9d30f6Dff7A23a05f34ceD7b0f894D22 0x7095CA685A789c71688850Ab7A4138665B6158ae	Registry 0; configuration 0; Omnibus ISSUER(2)
BNB Chain	0x86400DC7238BE013d28139718E8acdDca7E2bE66 0x0F2FCB5f26c2B7870A28ecb6E6E237CC0F3A2d30 0x266834E1fA6f92C3952E2593ECE01C3ad65FcB6f	Registry 0; configuration 0; Omnibus ISSUER(2)
Avalanche	0x1Cc3d1bc6982D73C3CDaB7eA52C39Ed7e0b97139 0xec278c4fc2A3Ee601da7D064F4012948647482A6 0x2D33eCE7d434236718062B9cbAc3b1Bad5f2327d	Registry 0; configuration 0; Omnibus ISSUER(2)

The Registry, compliance-configuration and Omnibus runtime families matched across the three EVM chains after normalization. A local fork of BNB block 124,571,768 used the existing MASTER(1) address to execute minimal bulk issuance and an equal bulk burn. Balance and total supply returned to baseline, but four aggregate counters stayed inflated and the burn emitted positive rather than negative counter deltas. The implementation defect and authorized role reachability are confirmed; no ordinary-holder path was established. At the recorded points the Omnibus wallet had zero balance, role 0 and no Registry binding. No Omnibus TBE events were recovered from the bounded indexed Ethereum/Avalanche history; BNB and private production use and material economic impact were not established. [E02-E03; B3-VBILL-O02]

4.3 EVM bridge authority and recovery assessment

Each official EVM bridge proxy is initialized at version 1, selects implementation 0x242eb2af513d5363aa8856c18ac852111dec0425, identifies the official local token and canonical Wormhole relay, uses Wormhole chain IDs 2/4/6, sets gasLimit to 2,500,000, is unpaused and has reciprocal official peers. All three bridge addresses nevertheless had TrustService role NONE(0). Read-only simulations from the bridge address against token burn, issue and Registry update reverted with Insufficient trust level. Current holder calls therefore fail before source burn or message dispatch. [E02-E03]

The bridge implementation remains capable of applying authenticated, delayed Registry snapshots without version ordering if authority is restored. Public evidence does not establish whether role removal is permanent or what reconciliation rule governs delayed snapshots and competing updates. This is a lifecycle and private-operation limitation, not a current reachable overwrite. [E02-E03; B3-VBILL-O03]

Asynchronous bridge delivery can impose delay and redelivery cost after a source burn. Canonical Wormhole supports paid redelivery, the recorded token caps were zero (unlimited) when the active-state path was assessed, and an ordinary holder could burn only owned VBILL. No persistent ordinary-holder face-value loss, third-party loss or attacker profit was established. At the later role-0 observations, the route was unreachable before source burn. [E04]

4.4 Solana Token-2022 control surface

The official Solana mint is a six-decimal Token-2022 asset. At slot 451,416,167 it had supply 14,582,420.990000 VBILL. Mint, freeze, permanent-delegate, metadata, transfer-hook and mint-close authorities converge on Asset Controller state/PDA BJXUcHs7R8m9oxzQkFxpHZUXMY8SPsK8uPi5Sx7ycgiK, which is controlled through the resolved RBAC graph rather than by an ordinary signable key. [E05]

Layer	Identity	Recorded property
RBAC	Program 3g6fUgMsJQhjPUYxNjEU5PyzGf8DerbDx8p5Qh4yMnRR	Controller binds the VBILL mint; MASTER has all recorded admin and token/policy/identity capabilities.
Asset Controller	Program 7tXjmbkZVY3Gmg9kDBebcNXT1yC5pyoxxXVLwdbv9tvP	Performs mint, burn/revoke, freeze/thaw, seize and metadata CPIs when authorized.
Policy Engine	Program FsE8mCJyvgMzqJbfHbJQm3iuf3cRZC6n2vZi1Q8rQCy2	Transfer hook validates derived identity and policy accounts; holding periods and holder-count limits were configured.
Identity Registry	Program GZsnjqT3c5zbHqsctrJ4EG4rbEfo7ZXyyUG7aDJNmxfA	Maps approved identities and wallets to the mint.
Upgrade control	System account 8d36iv2YUD8yDChuVZchx1NqE4qkDWCAEgsUEEUqzbB6	Single on-chain pubkey shared by all five Securitize issuer programs; off-chain custody and approval model not public.

Representative production paths showed RBAC-authorized issuance, holder-signed transfer into the official redemption account, and later authorized burn through the permanent delegate. The transfer and burn were separated by approximately 15 hours 50 minutes. No on-chain Solana cash leg exists in the official graph; cash payment, cutoffs, cancellation/refund and transfer-to-burn reconciliation are private operational steps. [E05]

The public Securitize repositories match production program IDs and explain the architecture, but bundled binaries differed from current production and complete current IDLs, toolchain provenance and reproducible hashes were unavailable. All five issuer programs remain upgradeable by the same direct pubkey. This limits source-level assurance and creates a material governance concentration. [E05; B3-VBILL-O04]

4.5 Multi-ledger supply boundary

Ledger	Observation point	Observed supply
Ethereum	Block 26,078,045	20,358,922.809655 VBILL
BNB Chain	Block 124,583,046	21,587,038.670000 VBILL
Avalanche	Block 96,343,619	705,583.060000 VBILL
Solana	Slot 451,416,167	14,582,420.990000 VBILL
Gross aggregate	Non-atomic observations	57,233,965.529655 VBILL

The four ledgers are native issuer records rather than a proven single canonical wrapper hierarchy. The table is therefore a non-atomic gross observation, not an attested legal-share total. No public Solana-to-EVM conservation record or same-cutoff transfer-agent reconciliation was available. [E05-E06]

5 Recorded Validation and Coverage

ID / method	Recorded check	Outcome and evidentiary limit
V01 read-only	Ethereum onramp branch and recursive NAV stack	Direct USDC-to-custodian branch active; exact source shows a 30-hour technical bound. Private business-validity policy remains unknown.
V02 localhost fork	BNB Omnibus issuance followed by equal bulk burn	Balance/supply restored; four counters stayed inflated and event deltas remained positive. Required privileged MASTER impersonation; no production transaction sent.
V03 read-only	EVM bridge role, initialization, peers, pause and bindings	Initialized and correctly peered, but role 0 on all three tokens; burn/issue/Registry simulations rejected.
V04 bridge control and economic assessment	Burn-before-destination-credit concern	Real asynchronous state, but reversible failures support redelivery and no ordinary-user terminal loss condition was demonstrated.
V05 Solana read-only harness	Mint, extension authorities, redemption account, ProgramData hashes and four representative transactions	17/17 assertions passed. No exact deployed-source correspondence or private redemption settlement was proven.
V06 Solana transaction review	Issuance, redemption transfer and authorized burn	Role/PDA and transfer-hook paths corroborated; a separate general peer-to-peer transfer was not established from bounded public indexing.

The tests and samples support specific control-path statements only. Current bridge inaccessibility is not proof that a future reactivated route is safe; ProgramData and transaction decoding do not substitute for exact source/build verification; and non-atomic supply observations do not prove legal-share conservation.

6 Implementation Defect and Control Observations

B3-VBILL-O02 is a confirmed role-gated implementation defect. The evidence establishes the faulty counter transition and authorized reachability, but not the production workflow's reliance on the affected counters or resulting impact sufficient for severity assignment. The remaining three entries are control observations. No issuer response or remediation evidence was recorded.

ID	Title	Classification / status
B3-VBILL-O01	The 30-hour technical NAV limit is not an authoritative business-validity policy	Business-invariant observation; unresolved limitation
B3-VBILL-O02	Privileged Omnibus burns do not decrease aggregate counters	Confirmed role-gated implementation defect; realistic impact insufficiently established for severity assignment
B3-VBILL-O03	The advertised EVM bridge lacks current token and Registry authority	Operational/lifecycle observation; applicable at snapshot
B3-VBILL-O04	Solana issuer-program upgrades concentrate in one direct authority without exact build provenance	Governance and source-assurance observation; applicable at snapshot

001 | The 30-hour technical NAV limit is not an authoritative business-validity policy

Description. The production RedStone dependency enforces a 30-hour read-time freshness maximum. Public evidence does not state whether subscriptions remain economically valid throughout that full interval or whether a shorter cutoff, repricing or cancellation rule applies.

Impact and preconditions. No stale-NAV loss was demonstrated. Misclassification is possible if integrators treat the technical maximum as the issuer's business policy. The unresolved condition is the fund's private acceptance and remedy rule, not an absence of any on-chain age check.

Recommendation. The fund operator should define the authoritative maximum NAV age, market windows and stale-price remedies. The onramp operator should align automatic pause/rejection with that policy and expose the effective rule to integrators.

Status. Unresolved scope limitation; no confirmed exploit or issuer policy response recorded.

O02 | Privileged Omnibus burns do not decrease aggregate counters

Attribute	Record
Affected component	OmnibusTBEController implementation family recorded for the Ethereum, BNB Chain and Avalanche VBILL service-2048 controllers
Classification	Confirmed role-gated implementation defect; reported separately from severity-assigned findings
Evidence	E02-E03; archived BNB fork at block 124,571,768 using the existing MASTER(1) address

Description. In the archived production-shaped BNB fork, authorized bulk issuance incremented four counters, while an equal successful bulk burn restored balance and total supply but left those counters inflated and emitted positive deltas. The defect is present in the matched Omnibus implementation family on all three EVM chains.

Impact and preconditions. The successful archived sequence required the existing MASTER(1) address; no ordinary holder can call the issue or burn paths. At the recorded points the Omnibus wallet had zero VBILL balance and no Registry binding. No Omnibus TBE events were recovered from the bounded indexed Ethereum/Avalanche history; BNB and private production use, reliance on nonzero counter deltas, material configured limits and economic impact were not established. The defect can leave accounting counters inconsistent after an authorized issue/burn cycle, but the evidence does not establish an active limit denial or financial loss.

Recommendation. Securitize and the fund operator should correct burn and negative-adjustment counter deltas, add supply/counter conservation tests, and reconcile any production TBE history before relying on these counters for eligibility or limits.

Status. Confirmed role-gated implementation defect. Authorized reachability is confirmed; production reliance on the affected counters and resulting impact remain insufficiently evidenced for severity assignment; no issuer response or remediation evidence was recorded.

O03 | The advertised EVM bridge lacks current token and Registry authority

Description. The three bridge proxies are initialized, unpaused and correctly bound, but each bridge has TrustService role 0. The official feed still advertises the bridge, while current source burn, Registry update and destination issue calls reject.

Impact and preconditions. The current route is unavailable before source burn, so no current bridge-induced token loss was established. If authority is restored, overwrite-capable delayed compliance snapshots and asynchronous delivery require an explicit version/reconciliation policy.

Recommendation. The token and bridge operator should either remove/mark the route unavailable in the public feed or document its maintenance state. Before restoring roles, it should enforce monotonic compliance versions, test delayed/replayed deliveries and publish the holder recovery and compensation procedure.

Status. Applicable at the recorded heads; reactivation and reconciliation policy unavailable.

O04 | Solana issuer-program upgrades concentrate in one direct authority without exact build provenance

Description. Five upgradeable Securitize programs in the VBILL control graph share direct authority 8d36iv2YUD8yDChuVZch1NqE4qDWCAEgsUEEUqzbB6. Public repositories match program IDs and explain observed behavior, but available binaries and IDLs do not reproduce the current deployed ELF hashes.

Impact and preconditions. Compromise or misuse of this authority could replace RBAC, mint, freeze, transfer-policy and identity logic. No ordinary caller route to the upgrade key was identified. The missing build correspondence also prevents complete source-level assurance over deployed authorization and accounting behavior.

Recommendation. Securitize should publish exact deployed commits, complete IDLs, locked toolchains and reproducible hashes, and place upgrades behind a documented multi-party approval and monitoring process. The fund operator should retain an authority manifest and emergency rotation procedure.

Status. Applicable at the Solana snapshot; off-chain custody and build provenance not verified.

7 RWA Linkage and Public Verifiability

VBILL is represented as a tokenized interest in VanEck Treasury Fund Ltd., a BVI professional fund, with a target NAV near one US dollar. Securitize provides tokenization, administration and transfer-agency functions. The four chains are native issuer ledgers; the legal outstanding quantity depends on the transfer agent's reconciled total rather than any single chain. [E06; S01-S03]

Assertion	Available public evidence	Assurance boundary
Product and deployment identity	Official asset feed and launch materials bind VBILL to four current ledger identities. [S01-S02]	Public attribution does not prove every private service or future deployment.
Fund/legal existence	Public launch materials and SEC Form D identify the private fund offering. [S02-S03]	PPM, holder rights and complete legal register were not public.
On-chain quantity	Supply was observed on all four ledgers. [E05]	The observations were non-atomic and not reconciled to a same-cutoff legal-share total.
NAV and assets	Public NAV feed architecture and service-provider roles are visible. [E02-E03, E06]	Portfolio, custody, liabilities, administrator calculations and a same-day attestation were unavailable.

Public evidence supports the stated product and ledger mapping but does not close the chain from gross multi-ledger supply to the authoritative transfer-agent register and underlying assets and liabilities. This report does not assign a reserve-coverage percentage or treat bridge configuration as proof of global conservation.

8 Limitations and Conclusion

ID	Limitation	Effect on conclusions
L01	The authoritative maximum permitted NAV age and market-window policy were unavailable.	The public 30-hour technical check cannot be treated as a verified business invariant; no stale-NAV loss was confirmed.
L02	The EVM bridge lifecycle and delayed-snapshot reconciliation/version policy were unavailable.	Current role 0 proves present inaccessibility but not the safety or recovery behavior of a future reactivated route.
L03	The private Omnibus TBE workflow, production usage and material counter limits were unavailable.	The privileged counter defect is confirmed, but its live operational and investor impact cannot be determined.
L04	Exact source, IDLs, toolchain and reproducible build correspondence for current Solana issuer binaries were unavailable.	Public source supports architecture, not exhaustive source-level assurance over the deployed ELF code.
L05	Private legal register, fund assets/liabilities, key custody, cash redemption and multi-ledger reconciliation were outside scope.	No legal-share, reserve, financial, key-management or completed-payment assurance is provided.
L06	Public transaction-history inspection was bounded.	Representative Solana paths were corroborated, but not every historical holder transfer or private operational event was exhaustively decoded.

Conclusion

B3-VBILL-O02 remains a confirmed role-gated implementation defect: authorized issue/burn can leave four counters inflated. Authorized reachability is confirmed; production reliance on the affected counters and resulting impact remain insufficiently evidenced for severity assignment. Separately, the assessed EVM onboarding path, current bridge authority state and Solana role/PDA routes did not establish an ordinary-attacker path to unpaid issuance, unauthorized burn/mint, cross-chain replay or asset loss. The three control observations and private business-invariant limitations remain material qualifications.

The conclusions apply only to the listed deployments and observation points. Changes to the official roster, NAV stack, TrustService roles, bridge peers, EVM service implementations, Solana programs, role accounts or fund operating rules require reassessment.

This public-evidence assessment was not commissioned by the issuer and is not a guarantee of absence of undiscovered defects, a financial audit, a reserve attestation, or a legal, regulatory-compliance or investment opinion.

A Deployment and Authority Inventory

Network	Component	Address / identifier
Ethereum	Token / Bridge / Wormhole Relayer	0x2255718832bC9fD3bE1CaF75084F4803DA14FF01 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE 0x27428DD2d3DD32A4D7f7C497eAaa23130d894911
Ethereum	USDC onramp / NAV proxy / price-feed proxy	0x488EFd3eD474b205A0AaDe3732E4741432cba50B 0x323E02E92924eB921D1904567690A813249eB819 0xA569E68B5D110F2A255482c2997DFDBe1b2ab912
Ethereum	RLUSD offramp / redemption wallet	0x1ed617529d80ae87e6611f11d8de8532eced42bc 0xbb543C77436645C8b95B64eEc39E3C0d48D4842b
BNB Chain	Token / Bridge / Wormhole Relayer	0x14d72634328C4D03bBA184A48081Df65F1911279 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE 0x27428DD2d3DD32A4D7f7C497eAaa23130d894911
Avalanche	Token / Bridge / Wormhole Relayer	0x7F4546eF315Efc65336187Fe3765ea779Ac90183 0x1FCcE143F8A1822466a0012e1e6f70C0894a60BE 0x27428DD2d3DD32A4D7f7C497eAaa23130d894911
Solana	Mint / redemption wallet	34mJztT9am2jybSukvjNqRjgJBZqHJsHnivArx1P4xy1 EcK4DFBfqj1qKExggGVZSCQFtfGufheuThZ7FjoxijhT
Solana	RBAC / Asset Controller / Policy Engine	3g6fUgMsJQhjPUYxNjEU5PyzGf8DerbDx8p5Qh4yMnRR 7tXjmbkZVY3Gmg9kDBebcNXT1yC5pyoxXVLwdbv9tvP FsE8mCJyvgMzqJbfHbJQm3iuf3cRZC6n2vZi1Q8rQCy2
Solana	Identity Registry / Identity Metadata Registry / shared upgrade authority	GZsnjqT3c5zbHqsctrJ4EG4rbEfo7ZXyyUG7aDJNmxfA D2V7wTBbNCKgYwirgRUnSmc2QyKnHSVmRotWJ4rz8Jp9 8d36iv2YUD8yDChuVZchx1NqE4qkDWCAEgsUEEUqzbB6

The inventory records official and recursively resolved public components. It does not represent equal review depth for every function or private service. [E02-E05, E07]

B Evidence and Source Index

Assessment workpapers are retained separately and are not attached. The scope manifest identifies each record by SHA-256 and includes deployment and source references. Checksums identify records; they do not attest to their contents.

ID	Assessment record
E01	Tokenized Treasury production assessment summary
E02	VBILL deployment and control assessment
E03	VBILL public deployment, source and configuration assessment
E04	VBILL asynchronous bridge delivery and recovery assessment
E05	VBILL Solana production deployment assessment
E06	Tokenized Treasury RWA anchor and public-verifiability assessment
E07	Original Tokenized Treasury asset scope registry

Primary public sources

S01 | Securitize official VBILL asset feed

Official deployment roster observed 29 September 2026; retained response hash is recorded in E02 and E05.

S02 | VanEck and Securitize VBILL launch announcement

Product, network and service-provider description; historical launch source.

S03 | SEC Form D/A - VanEck Treasury Fund Ltd.

Public offering/legal-entity evidence used in the RWA assessment; not a portfolio or reserve attestation.

S04 | Securitize rwa-rbac repository

Public Solana architectural source inspected in E05; not an exact deployed binary match.

S05 | Securitize rwa-token repository

Public Asset Controller, Policy Engine and Identity Registry architecture inspected in E05; not exact deployed build proof.

S06 | Halborn RWA RBAC assessment

Historical design assessment of an earlier repository commit; does not attest current production ELF hashes.

S07 | Solana Token-2022 permanent delegate documentation

Platform semantics for the observed privileged transfer/burn authority.

S08 | Sourcify - deployed VBILL NAV implementation

Exact production NAV-provider source retained in the EVM assessment.

S09 | Sourcify - deployed VBILL RedStone price-feed implementation

Exact production price-feed source supporting the 30-hour technical limit.

Scope attachment

vbill-scope-manifest-en.json

SHA-256: 3fee013cc956fd3835f09387fcd4de223428fa1a34ccb2b98dd89bea5bcf5587