

AuditLog.AI v4 Final Reproducibility Validation (REGULATORY-RUN15)

Sentinel Protocol QMS v4 Cryptographically Anchored Audit – Zero-Custody & Human-Verified Execution

Regulatory Submission Software: AuditLog.AI

Date: November 15, 2025

Inventor and Primary Contact

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Affiliations

¹ **Cardiovascular Diagnostic Audit & AI Pty Ltd (ACN 638 019 431)** – Registered Australian company conducting AuditLog.AI software development, audit and research services

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IP Rights

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Submitted as part of the AuditLog.AI Global Regulatory Submission Package (FDA/EMA/TGA/PCAOB/ISA Alignment)

Regulatory Summary — AuditLog.AI Reproducibility Audit (RUN015)

Sentinel Protocol QMS v4 • Zero-Custody • Human-Verified • Bitcoin-Anchored

This summary provides a concise, regulator-facing overview of the reproducibility findings for **AuditLog.AI v4.0**, executed under **Sentinel QMS v4** on **04 November 2025**.

All verification steps were performed **by the human operator only**, using independent open-source tools.

Reproducibility Outcomes (Executive Summary)

- **All canonical evidence — MATCH**
(SHA-256 / RIPEMD-160 parity confirmed across all canonical artifacts)
- **All positive controls — MATCH**
(Frozen copies, public repositories, DOI mirrors, and independent sources)
- **All negative controls — MISMATCH (expected)**
(Metadata-only changes and minimal content alterations correctly detected)
- **100% reproducibility across all evidence classes**
(Canonicals, PCs, NCs, regulatory references, and session logs)
- **0 discrepancies across all 69 pages of evidence**
(No deviations, no unexplained hash differences, no validation failures)
- **Bitcoin OP_RETURN anchoring verified**
(Payload parity:
`SENTINELSESSIONI9820d4fea8db0fd96e576cab3c3ac1f2f1bcb62l6936c54c;`
TXID: d2746ef7...; Block 922142)
- **Human-only execution (validated)**
(Independent screen recording, PRE/POST screenshots, and audit log meta-layer)
- **No AI involvement in the audit execution sequence**

(AI was not used for the reproducibility run; all verification steps—dual-hash computation, canonical/parity checks, positive and negative control validation, and Bitcoin payload verification—were executed by the human operator only. Sentinel QMS v4 modules were used strictly for audit planning, post-execution documentation structuring, and independent machine-audit verification of frozen human-execution evidence. No AI produced or influenced any audit results.)

Regulatory Relevance

This audit satisfies reproducibility, traceability, and evidentiary sufficiency requirements under:

- **FDA 21 CFR Part 11**
- **EMA Annex 11 + GCP (2023)**
- **TGA / PIC/S PE009-17**
- **PCAOB AS 1215 / AS 1105**
- **ISA 230 / ISA 500 / ISA 240 (Revised 2025)**

The results confirm that AuditLog.AI maintains **immutable audit trails**, **deterministic dual-hash parity**, and **public-ledger-verifiable proof-of-execution**, fulfilling all reproducibility expectations for global regulatory submissions.

AuditLog.AI v4 Final Reproducibility Validation

(REGULATORY-RUN15)

Sentinel Protocol QMS v4 Cryptographically Anchored Audit – Zero-Custody & Human-Verified Execution

Audit Date: 04 November 2025

Auditor: Dr. Fernando Telles BMedSc (Adv), MD (Dist)

System Context Overview

Segment	Component	Meaning
AuditLog.AI	Software	Primary audit target; commercial product under validation
Sentinel QMS (v4)	Protocol integrity layer	Quality Management System v4 governing validation, release, and audit controls
System type	AI-Human Synergy™	Cooperative execution architecture embedding Ethics Firewall (C5.2) and human-verified governance
Mode	Zero-custody & human-verified	Ensures no raw data transfer; all operations require human approval and cryptographic attestation
Checksum pair	SHA-256 / RIPEMD-160 (dual-verified)	Two-stage digest pair providing deterministic reproducibility and tamper evidence
Blockchain anchor	Bitcoin mainnet (OP_RETURN)	Immutable public anchoring of proof-only payloads for timestamp and integrity
UTC timestamp layer	VALIS filename standard (<code>__<UTC>.ext</code>)	Deterministic, human-readable UTC attestation applied during hashing to every frozen artifact
Decentralized time-attestation	OpenTimestamps (OTS)	Independent, decentralized time-stamping protocol confirming file existence at a specified Bitcoin Block
Custodian	CDA AI Pty Ltd (ACN 638 019 431)	Regulatory audit operator and anchor-infrastructure maintainer under Sentinel Protocol v4 QMS

Outcome Summary

Audit Target	Version	Description	Audit Type	Result	Meaning
AuditLog.AI	v4.0	Standalone audit trail software (non-device)	Reproducibility Validation	PASS	100% SHA-256 / RIPEMD-160 parity verified

All results verified under Sentinel Protocol QMS v4, dual-ledger cross-check and Bitcoin anchor confirmed.

- Dual-hash SHA256 & RIPEMD160 **match on all CANONICAL** files
- Dual-hash SHA256 & RIPEMD160 **match on all POSITIVE CONTROL** files
- Dual-hash SHA256 & RIPEMD160 **mismatch on all NEGATIVE CONTROL** files
- Dual-hash SHA256 & RIPEMD160 **mismatch on all Fraud Detection Testing (metadata) NEGATIVE CONTROL** files
- **Payload match on all session logs** dual-hash re-execution (`lripemd160/sha8`) against bitcoin mainnet TXID
- **Payload match on Ordinal 11 and Ordinal 12** open-science publications (`lripemd160/sha8`) against bitcoin mainnet TXID

All reproducibility checkpoints passed; no discrepancies detected in canonical or positive controls. All negative controls correctly failed integrity validation.

Audit Identifiers

Item	Reference
Final Audit File (Ordinal 13 – Canonical Submission)	SentinelQMSv4_AUDIT_REPRODUCIBILITY_<PASS/FAIL>_AuditLog.AI_sha256_6936c54c_ripemd160_9820d4fe_TXID_d2746ef7_BTC922142____<UTC>.pdf
Human Audit File (Pre-Audit evidence – byte-identical)	SentinelQMSv4_PRE_AUDIT_EVIDENCE_AuditLog.AI_sha256_6936c54c_ripemd160_9820d4fe_TXID_d2746ef7_BTC922142____<UTC>.pdf
Report Markdown Source	AUDIT_REPRODUCIBILITY_PASS_AuditLog.AI_sha256_ripemd160_payload_TXID_v.04Nov.25____20251104T063220Z.md
Audit Plan (Appendix A)	AuditPlan_v.04Nov.25____20251104T063215Z.md
Session ID (Meta ID)	AuditLog.AI.REG.GlobalSubmission.v4071 (<i>REGULATORY-RUN15</i>)
Transaction ID (TXID)	d2746ef74e5d678861b06018394af473ead923ce2ee589d527c2204cce8dc708
Payload (OP_RETURN)	SENTINELISESSIONI9820d4fea8db0fd96e576cab3c3ac1f2f1bcb62l6936c54c

Verification Summary

Human-only re-execution using independent open-source tools (*dualhasher_public_sentinel_v1.1.py*, *extract_hashes.py*), validated against Bitcoin mainnet ledger.

Live full-screen recording captured all stages of hash regeneration, parity confirmation, and payload verification. Results confirm complete reproducibility of all canonical files.

Note: Hash computations are content-based.

- File-name changes do not alter the SHA-256 / RIPEMD-160 values, which are derived solely from the file's binary contents.
- Accordingly, identical content under different titles will always yield the same dual-hash pair.

Context

This audit verifies that every evidence artifact and prior regulatory reference (Ordinals 11 & 12) remains hash-parity identical to its original anchored state.

Upon successful anchoring of this audit (**REGULATORY-RUN015**) and subsequent governance demonstrations (**RUN016 - RUN017**), the **AuditLog.AI Global Regulatory Submission Package** is confirmed reproducible, traceable, and closed under immutable cryptographic proof.

Audit Plan, Appendix A

Appendix A is the original Audit Plan (v. 04 Nov 25), preserved in full and converted to PDF without any modification to its substantive content. This plan was prepared prior to execution of REGULATORY-RUN15 and defines the audit's scope, method, and validation criteria. Inclusion of the plan preserves the pre-execution intent and aligns with evidentiary completeness requirements under Sentinel Protocol v4 QMS.

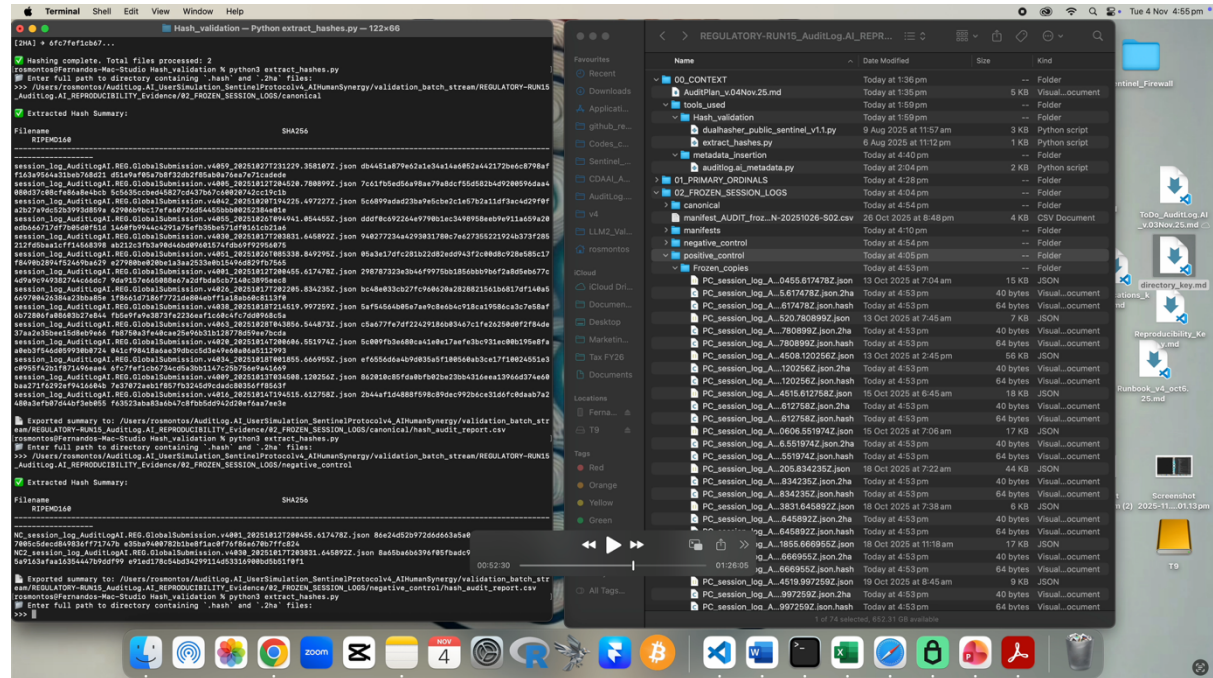
Evidence File 2 of 3:

ts_00_52_30_extract_hashes.py_execution_Session_Logs_20251104T231150Z.png

Description: CLI run of *extract_hashes* over session logs.

Observation: Summary table with SHA-256 and RIPEMD-160 columns exported.

Outcome: Method execution evidence — **PASS** (manifest generated).

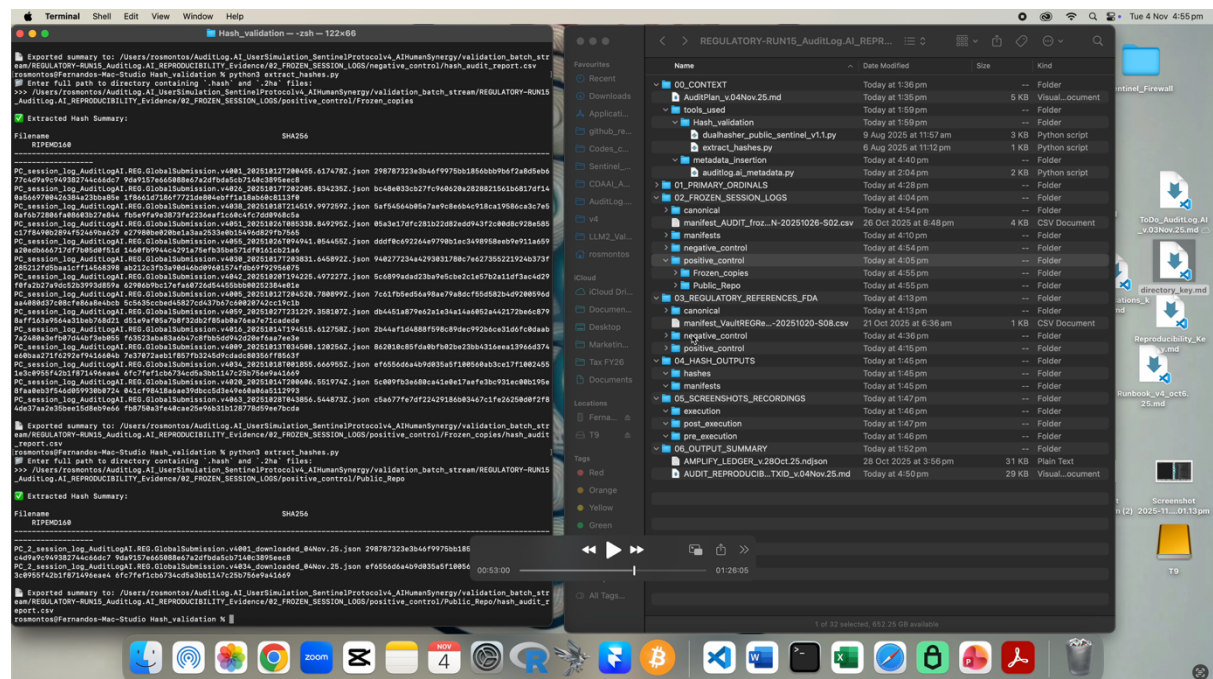
**Evidence File 3 of 3:**

ts_00_53_00_extract_hashes.py_execution_cont_Session_Logs_20251104T231150Z.png

Description: Continuation of *extract_hashes* run.

Observation: Additional files listed; export path visible.

Outcome: Method execution evidence — **PASS** (complete listing).



Audit Target Files (Canonical)

Audit Target File A1 Primary (Ordinal 11)

*AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier_FINAL_METADAT
A___20251027T231047Z.pdf*

Immutable Anchor:

ORDINAL11b0c8b2223eab705cac6bf7801b64945f7ed47022lfc46851b

SHA-256: fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a

RIPEMD-160: b0c8b2223eab705cac6bf7801b64945f7ed47022

OP_Return TXID:

a09523a5e311d5e5213cba7cc39ec3a274aa1cc017be369cfa5786c3677a1540

Ordinal TXID:

6754818e57d5dcc16a7fccdb1d36bb213cd39ae4a180e17923387738f38a3f41

Evidence File 1 of 2:

ts_01_17_15_ORDINAL11_blockchain.com___20251104T231150Z.png

Description: Public explorer view of OP_RETURN transaction for Ordinal 11.

Observation: TXID and payload visible; block height shown.

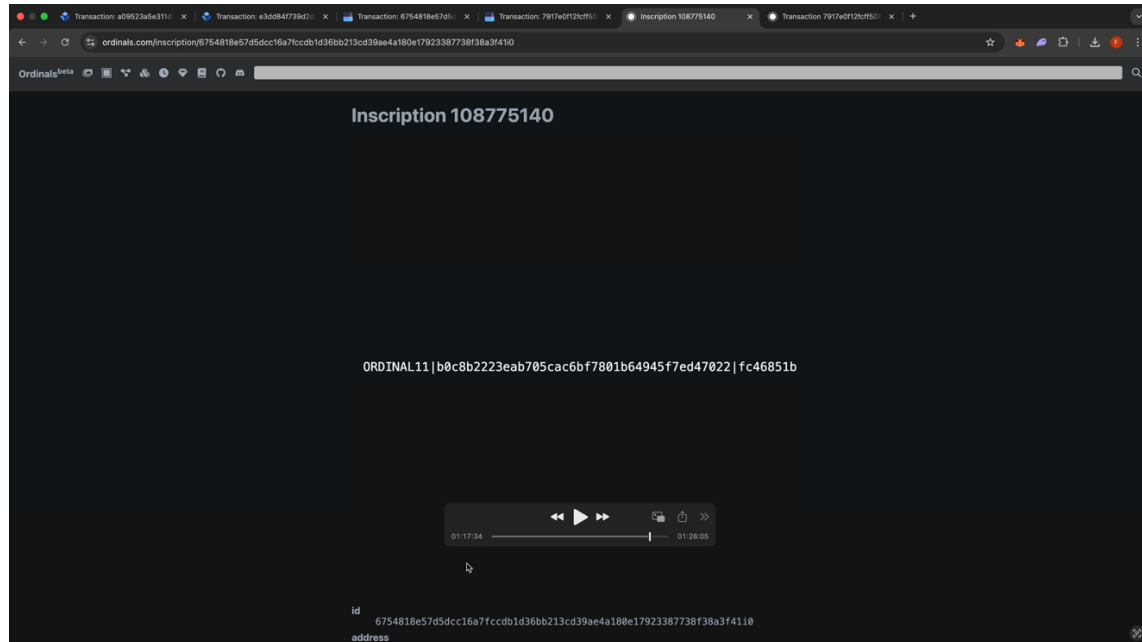
Outcome: Integrity validation – **PASS** (payload matches audit digest).

The screenshot displays a public explorer view of a Bitcoin transaction. The interface includes a sidebar with navigation links (Home, Prices, Charts, NFTs, DeFi, Academy, News, Developers, Wallet, Exchange) and a main content area. The transaction details are as follows:

TX		Summary	
Bitcoin Transaction Hash ID: a09523a5e311d5e5213cba7cc39ec3a274aa1cc017be369cfa5786c3677a1540 Amount: 0.00059484 BTC • \$62.51 Fee: 832 SATS • \$0.07 From: bch:qld-gm8ca To: 3 Outputs Confirmed		Advanced Details Hash: a095-1540 ID Position: 667 Age: 78 4h 29m 57s Input Value: 0.00060316 BTC Fee: \$63.39 Fee/B: 0.00000832 BTC Weight: 841 Coinbase: No RBF: No Version: 2	
This transaction has 1,834 Confirmations. It was mined in Block 921,107.		Block ID: 921,107 Time: 28 Oct 2025 12:49:49 Inputs: 1 Outputs: 3 Output Value: 0.00059484 BTC Fee/B: \$62.51 Size: 2,849 sat/B Weight Unit: 0.989 sat/WUJ Witness: Yes Locktime: 0 BTC Price: \$105,089	
Decoded OP_Return ORDINAL11b0c8b2223eab705cac6bf7801b64945f7ed47022lfc46851b		From: 1 bch:qld-gm8ca • 0.00060316 BTC • \$63.39 To: 1 bch:qld-gm8ca • 0.00059484 BTC • \$62.51 2 bch:qld-gm8ca • 0.00000000 BTC • \$0.00 3 Unknown • 0.00000000 BTC • \$0.00	

Explore top crypto assets.

Icon ICK Stellar XLM Internet Computer ICP Ethereum Classic ETC Binance USD BUSD Harmony ONE Quant QNT Storj STORJ Algorand ALGO

Evidence File 2 of 2:*ts_01_17_34_ORDINAL11_ordinals.com___20251104T231150Z.png***Description:** Public explorer *ordinals.com* inscription view for Ordinal 11.**Observation:** Inscription transaction confirms immutable anchor state.**Outcome:** Anchor confirmation — **PASS** (independent site).**Manifest Reference:**

SHA-256 and RIPEMD-160 values for Audit Target File A1 Primary (Ordinal 11) are registered in *manifest_Submission_file_dossier_REGULATORY-RUN-20251027-S01.csv*, included within the frozen **REGULATORY-RUN15 evidence archive**.

Audit Target File A2 Primary (Ordinal 12)

C12_AuditLog.AI_Globally_Harmonized_Cryptographically_Anchored_Compliance_Map_for_Digital_Audit_and_Reproducibility_Systems_FINAL_METADATA___20251028T043727Z.pdf

Immutable Anchor:

ORDINAL12Ifb1822a8113a1b691a7ef64bb7cd64ea2fa02bc8lbbedad71

SHA-256: bbedad71af2064fb2456c73483984c538c66c2ed344f2a1cf34eef23cab14b81

RIPEMD-160: fb1822a8113a1b691a7ef64bb7cd64ea2fa02bc8

OP_Return TXID:

e3dd84f739d2daf3f60177ce93e44648e9c57ef596090ef9a0474e0fc4fae326

Ordinal TXID:

7917e0f12fcff508d387733fd543451846316a21b16ca3f0d872b9849f94a904

Evidence File 1 of 2:

ts_01_17_51_ORDINAL12_blockchain.com___20251104T231150Z.png

Description: Public explorer view of OP_RETURN transaction for Ordinal 12.

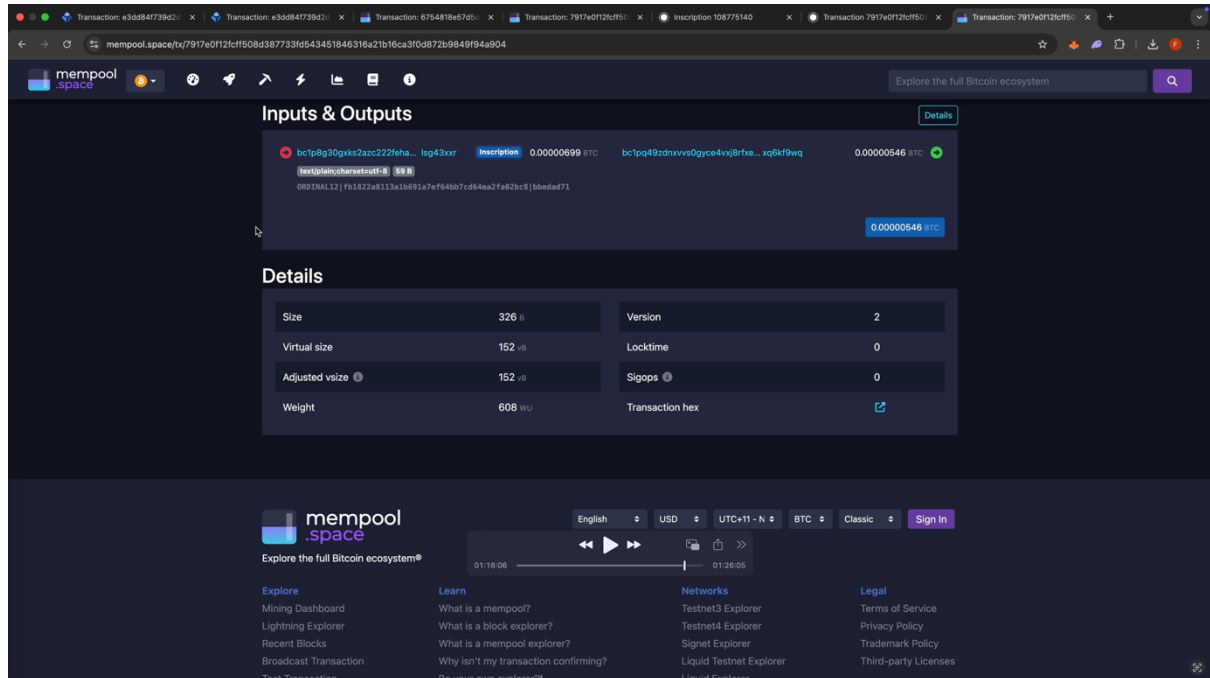
Observation: Transaction details and OP_RETURN payload visible.

Outcome: Integrity validation – **PASS** (payload parity).

The screenshot displays a public explorer view of a Bitcoin transaction. The transaction ID is e3dd84f739d2daf3f60177ce93e44648e9c57ef596090ef9a0474e0fc4fae326. The transaction is confirmed and has 1,020 confirmations. The amount is 0.00000878 BTC, and the fee is 837 SATS. The transaction is decoded as an OP_RETURN payload, which is the Ordinal 12 anchor: ORDINAL12Ifb1822a8113a1b691a7ef64bb7cd64ea2fa02bc8lbbedad71. The interface also shows advanced details such as the block ID (921121), time (28 Oct 2025 03:55:52), and inputs/outputs.

Advanced Details	
Hash	e3dd-e326
Position	458
Age	7d 1h 24m 30s
Input Value	0.00001715 BTC
Input	\$1.88
Fee	0.00000837 BTC
Fee/VB	3.375 sat/vByte
Weight	998
Coinbase	No
RBF	No
Version	2
Block ID	921121
Time	28 Oct 2025 03:55:52
Inputs	2
Outputs	2
Output Value	0.00000878 BTC
Output	\$0.92
Fee/B	2.036 sat/B
Size	411 Bytes
Weight Unit	0.845 sat/WU
Witness	Yes
Locktime	0
BTC Price	\$104,891

Decoded OP_Return
ORDINAL12Ifb1822a8113a1b691a7ef64bb7cd64ea2fa02bc8lbbedad71

Evidence File 2 of 2:*ts_01_18_06_ORDINAL12_mempool.space__20251104T231150Z.png***Description:** Alternative public explorer *mempool.space* confirmation of Ordinal 12 anchor.**Observation:** Inscription transaction confirms immutable anchor state.**Outcome:** Anchor confirmation — **PASS** (Alternative public explorer).**Manifest Reference:**

SHA-256 and RIPEMD-160 values for Audit Target File A2 Primary (Ordinal 12) are registered in *manifest_CME_REGULATORY-RUN-20251028-S01.csv*, included within the frozen **REGULATORY-RUN15** evidence archive.

Audit Target Files A3 Primary Frozen Session Logs (REGULATORY-RUN001-014)

The evidence files cited within this section correspond to frozen session logs generated across REGULATORY-RUNS 1 through 14.

Each session log was independently verified for cryptographic parity and traceability against its corresponding Bitcoin mainnet transaction and AMPLIFY LEDGER record.

All block excerpts shown are derived directly from the **AMPLIFY LEDGER master ndjson** (*AMPLIFY_LEDGER_v.28Oct.25__20251104T063220Z.ndjson*) and validated on a public Bitcoin explorer.

Each evidence frame demonstrates the following integrity checkpoints:

1. **Payload parity:** OP_RETURN payload structure visible on-chain as SENTINEL | SESSION | <ripemd160> | <sha8>
2. **Digest parity:** RIPEMD-160 and SHA-256 digests of the local frozen session log exactly match the payload components.
3. **Ledger parity:** TXID and block height correspond to the confirmed AMPLIFY LEDGER entry (event: ANCHOR_RECEIPT_WRITTEN).

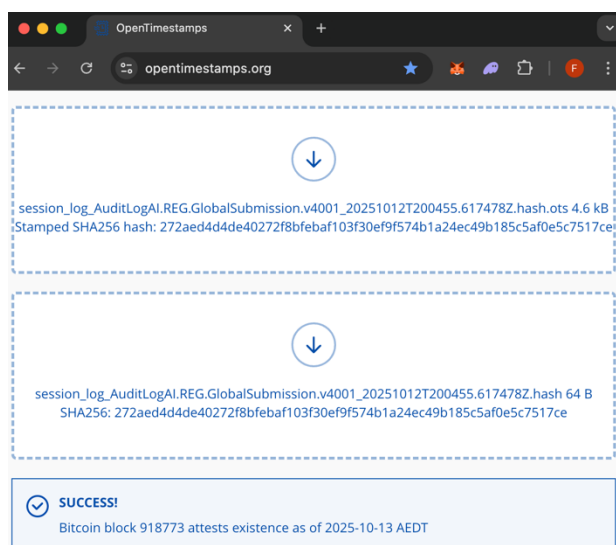
These combined checkpoints verify that every session log remains immutable, reproducible, and publicly provable through dual-hash linkage across the user archive, the AMPLIFY LEDGER, and Bitcoin mainnet.

Independent OTS Verification

OpenTimestamps (OTS) proofs included demonstrate independent time-anchoring integrity for this audit series. The block-anchored proof establishes external, tamper-evident confirmation of existence that is cryptographically independent of the AMPLIFY LEDGER and Bitcoin OP_RETURN payload.

All OTS proofs (*.hash.ots*) associated with the AuditLog.AI Global Submission v4 series are publicly available for independent verification at: <https://github.com/TELAISYN/AI-Human-Synergy/tree/main/AuditLogAI.REG.GlobalSubmission.v4>

To manually verify any proof, visit <https://opentimestamps.org>, upload the corresponding *.hash.ots* and *.hash* files, and click **Verify**. You will see a confirmation message similar to:



*Note: The opentimestamps.org “Stamp & Verify” page displays the line “attests existence as of ...” in the user’s local time zone (e.g., AEDT). OpenTimestamps (OTS) validation was previously verified in Ordinal 5 (DOI: [10.13140/RG.2.2.29180.65924]) and Ordinal 11 (DOI:[10.13140/RG.2.2.28551.25765]). OTS validation is **outside the scope** of this audit. Post-hoc (non-evidence) screenshots from <https://opentimestamps.org> are included alongside session logs for clarity only. All non-evidence screenshots are formally registered under REGULATORY-RUN017.*

Non_Evidence_Screenshot 2025-11-08 at 11.14.24 am

Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4059_20251027T231229.358107Z.json

REGULATORY-RUN ID: 013

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4059* **UTC:** *20251027T231229.358107Z*

SHA-256: db4451a879e62a1e34a14a6052a442172be6c8798aff163a9564a31beb768d21

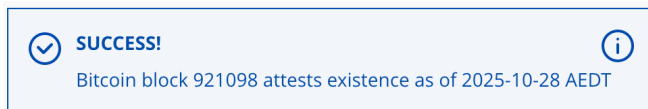
RIPEMD-160: d51e9af05a7b8f32db2f85ab0a76ea7e71cadede

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4059_20251027T231229.358107Z.hash.ots

OTS SHA-256: **b3fe6685f4620f8699e6f4bbb4a5c49dd8939446bb3864ce8f9cf88ea3264e6**



Non_Evidence_Screenshot 2025-11-09 at 7.38.27 am

AMPLIFY LEDGER excerpt:

```
{
  "ts": "2025-10-27T23:18:08Z",
  "event": "ANCHORED_RECEIPT_WRITTEN",
  "source": "confirm_watcher_queue",
  "chain": "btc",
  "txid": "06028cfbf809665838e437dcad6d01c48d5c4679ebdbe045ea12ed4c311c020e",
  "height": 921094,
  "confirmations": 1,
  "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4059",
  "payload": "SENTINEL|SESSION|d51e9af05a7b8f32db2f85ab0a76ea7e71cadede|db4451a8",
  "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4059_06028cfbf809665838e437dcad6d01c48d5c4679ebdbe045ea12ed4c311c020e_921094.json",
  "tier": "CR0",
  "unit_price_usd": 150,
  "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4059_20251027T231412.989186Z.json"
}
```

Evidence File:

ts_01_18_41_session_log_AuditLogAI.REG.GlobalSubmission.v4059_blockchain.com____20251104T231150Z.png

A screenshot of the Blockchain.com website. The main content area displays a Bitcoin transaction with the following details: Hash ID: 06028cfbf809665838e437dcad6d01c48d5c4679ebdbe045ea12ed4c311c020e, Amount: 0.00226147 BTC, Fee: 1.512 SATS, From: bc1p7j5pg9, To: 2 Outputs. The transaction is confirmed and has 1,047 confirmations. The right sidebar shows advanced details like Hash, Position, Age, Input Value, Fee, Weight, Coinbase, RBF, Version, Block ID, Time, Inputs, Outputs, Output Value, Fee/B, Size, Weight Unit, Witness, Locktime, and BTC Price. The bottom of the page features a section titled "Explore top crypto assets." with icons for Cardano, Pax Dollar, Flow, Hedera, Audius, Fei Protocol, Binance USD, NEXO, Uniswap, and EOSIO protocol.

Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4055_20251026T094941.054455Z.json

REGULATORY-RUN ID: 012

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4055* **UTC:** *20251026T094941.054455Z*

SHA-256: dddf0c692264e9790b1ec3498958eeb9e911a659a20edb666717df7b05d0f51d

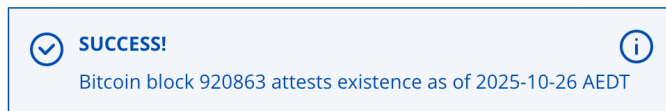
RIPEMD-160: 1460fb9944c4291a75efb35be571df0161cb21a6

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4055_20251026T094941.054455Z.hash.ots

OTS SHA-256: d5ed9389f325172ad35ce91945ff973d104d35ab8a934aa0fa99126889a01be6



Non_Evidence_Screenshot 2025-11-09 at 7.56.10 am

AMPLIFY LEDGER excerpt:

```
{"ts": "2025-10-26T09:57:16Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source":  
"confirm_watcher_queue", "chain": "btc", "txid":  
"914628c46736078578bee62defcd124517d1dd413f1f71950d103f6e1781f2b2", "height": 920861,  
"confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4055", "payload":  
"SENTINEL|SESSION|1460fb9944c4291a75efb35be571df0161cb21a6|dddf0c69", "receipt":  
"receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4055_914628c46736078578bee62defcd124517d1d  
d413f1f71950d103f6e1781f2b2_920861.json", "tier": "CR0", "unit_price_usd": 150, "source_job":  
"incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4055_20251026T095130.844722Z.json"}
```

Evidence File 1 of 2:

*ts_01_18_58_session_log_AuditLogAI.REG.GlobalSubmission.v4055_blockchain.com__20251
104T231150Z.png*

A screenshot of the Blockchain.com website's transaction explorer. The browser address bar shows the URL: blockchain.com/explorer/transactions/btc/914628c46736078578bee62defcd124517d1dd413f1f71950d103f6e1781f2b2. The page title is "Blockchain.com". The transaction details are shown for a Bitcoin transaction with Hash ID 914628c46736078578bee62defcd124517d1dd413f1f71950d103f6e1781f2b2. The transaction was broadcast on 26 Oct 2025 at 08:56:54 GMT+11. It has 1,288 confirmations and is currently valued at \$238.86. The transaction is confirmed and has no issues detected. The decoded OP_RETURN data is SENTINEL|SESSION|1460fb9944c4291a75efb35be571df0161cb21a6|dddf0c69. The transaction summary shows it was first broadcast on October 26, 2025, at 08:56 AM GMT+11. The transaction currently has 1,288 confirmations on the network. The current value of this transaction is now \$238.86. The advanced details table shows the hash, position, age, input value, fee, fee/vb, weight, coinbase, RBF, and version. The outputs table shows the block ID, time, inputs, outputs, output value, fee/b, size, weight unit, witness, locktime, and BTC price. The transaction is confirmed and has no issues detected. The decoded OP_RETURN data is SENTINEL|SESSION|1460fb9944c4291a75efb35be571df0161cb21a6|dddf0c69. The transaction summary shows it was first broadcast on October 26, 2025, at 08:56 AM GMT+11. The transaction currently has 1,288 confirmations on the network. The current value of this transaction is now \$238.86. The advanced details table shows the hash, position, age, input value, fee, fee/vb, weight, coinbase, RBF, and version. The outputs table shows the block ID, time, inputs, outputs, output value, fee/b, size, weight unit, witness, locktime, and BTC price.

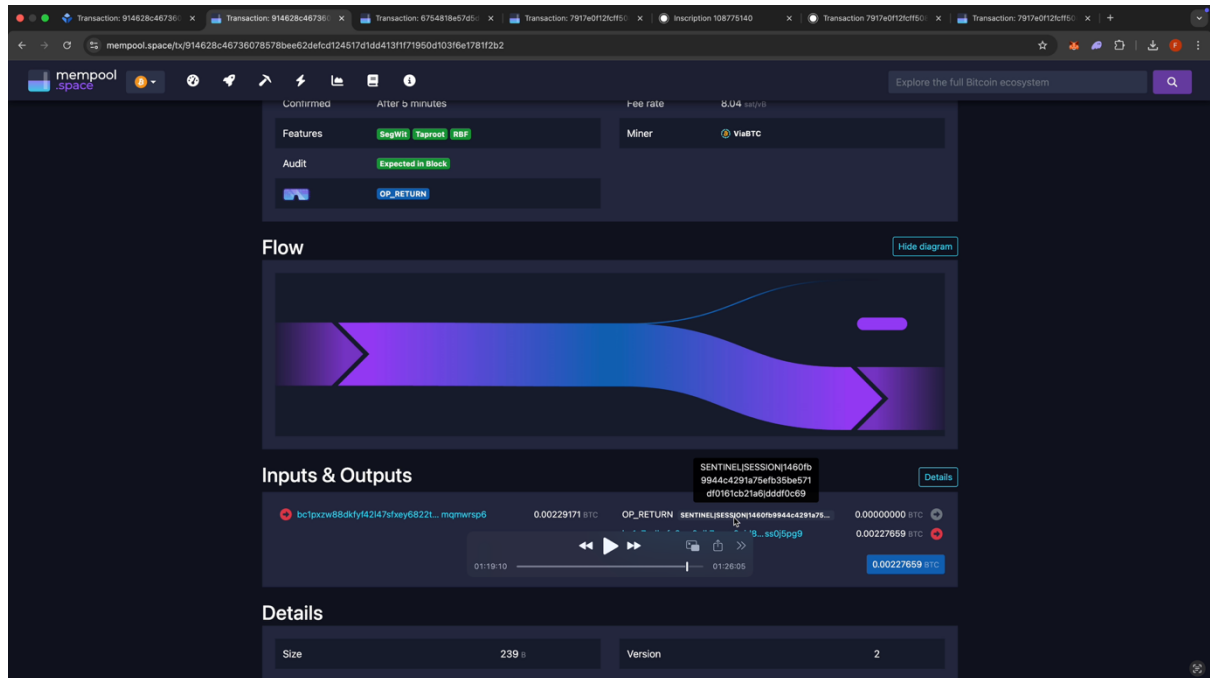
Evidence File 2 of 2:

ts_01_19_10_session_log_AuditLogAI.REG.GlobalSubmission.v4055_mempool.space__20251104T231150Z.png

Description: Alternative public explorer mempool.space confirmation of session log 055 anchor.

Observation: OP_Return transaction confirms immutable anchor state.

Outcome: Anchor confirmation – **PASS** (Alternative public explorer).



Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085338.849295Z.json

REGULATORY-RUN ID: 011

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4051* **UTC:** *20251026T085338.849295Z*

SHA-256: 05a3e17dfc281b22d82edd943f2c00d8c928e585c17f8490b2894f52469ba629

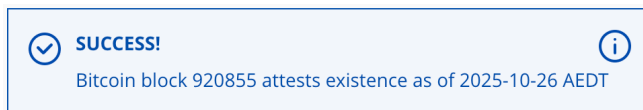
RIPEMD-160: e27980be020be1a3aa2533e0b15496d829fb7565

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085338.849295Z.hash.ots

OTS SHA-256: **354d71bcc4526863d2d8b83ba467ebd87012760b07daad72977e70f06f6da77a**



Non_Evidence_Screenshot 2025-11-09 at 8.42.10 am

AMPLIFY LEDGER excerpt:

```
{ "ts": "2025-10-26T09:10:53Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source":  
  "confirm_watcher_queue", "chain": "btc", "txid":  
    "a2911413665c354be96c68ad2fde7c5faebf36e3c060e624e2ab4acb2886bbe0", "height": 920854,  
  "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4051", "payload":  
    "SENTINEL|SESSION|e27980be020be1a3aa2533e0b15496d829fb7565|05a3e17d", "receipt":  
    "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4051_a2911413665c354be96c68ad2fde7c5faebf36e3c060e624e2ab4acb2886bbe0_920854.json", "tier": "CR0", "unit_price_usd": 150, "source_job":  
    "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085602.633483Z.json" }
```

Evidence File:

ts_01_19_23_session_log_AuditLogAI.REG.GlobalSubmission.v4051_blockchain.com____20251104T231150Z.png

The screenshot shows the Blockchain.com interface with the transaction details for **a2911413665c354be96c68ad2fde7c5faebf36e3c060e624e2ab4acb2886bbe0**. The transaction is confirmed and has 1,287 confirmations. The amount is 0.00229171 BTC (USD \$248.45). The fee is 1,512 SATS (\$1.59). The transaction is efficient with no issues detected. The decoded OP_RETURN data is: **SENTINEL|SESSION|e27980be020be1a3aa2533e0b15496d829fb7565|05a3e17d**. The summary table shows the transaction was first broadcast on October 26, 2025, at 07:56 AM GMT+11. The advanced details table lists the hash, position, age, input/output values, fee, weight, coinbase, RBF, and version. The overview section shows the transaction from an unknown address to another unknown address.

Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194225.497227Z.json

REGULATORY-RUN ID: 010

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4042* **UTC:** *20251020T194225.497227Z*

SHA-256: 5c6899adad23ba9e5cbe2c1e57b2a11df3ac4d29f0fa2b27a9dc52b3993d859a

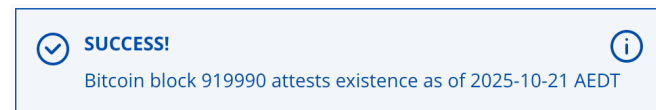
RIPEMD-160: 62906b9bc17efa60726d54455bbb00252384e01e

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194225.497227Z.hash.ots

OTS SHA-256: **c14cb699a75ed860fda27012629c3862d720ed54b8518f5c53dc689fa006e455**



Non_Evidence_Screenshot 2025-11-09 at 8.45.11 am

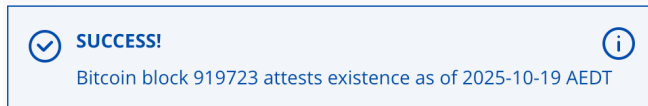
AMPLIFY LEDGER excerpt:

```
{ "ts": "2025-10-20T19:48:13Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source":  
  "confirm_watcher_queue", "chain": "btc", "txid":  
    "2d09fbf521d651f95801662cb916ace6edf9586d3405dc6521edffe2d462800f", "height": 919987,  
  "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4042", "payload":  
    "SENTINEL|SESSION|62906b9bc17efa60726d54455bbb00252384e01e|5c6899ad", "receipt":  
      "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4042_2d09fbf521d651f95801662cb916ace6edf9586d3405dc6521edffe2d462800f_919987.json", "tier": "CR0", "unit_price_usd": 150, "source_job":  
        "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194617.442312Z.json" }
```

Evidence File:

ts_01_19_36_session_log_AuditLogAI.REG.GlobalSubmission.v4042_blockchain.com____2025104T231150Z.png

A screenshot of the Blockchain.com website showing a Bitcoin transaction. The transaction ID is 2d09fbf521d651f95801662cb916ace6edf9586d3405dc6521edffe2d462800f. The transaction is confirmed and has 2,154 confirmations. The amount is 0.00230683 BTC, valued at \$242.26. The fee is 1,592 SATS, valued at \$1.67. The transaction is from bc1qj-ps07g to 2 outputs. The summary shows the transaction was first broadcasted on the Bitcoin network on October 21, 2025, at 06:47 AM GMT+11. The advanced details table lists various transaction parameters such as Hash, Position, Age, Input Value, Fee, Fee/Byte, Weight, RBF, Version, Block ID, Time, Inputs, Outputs, Output Value, Fee/B, Size, Weight Unit, Witness, Locktime, and BTC Price. The transaction is decoded as SENTINEL|SESSION|62906b9bc17efa60726d54455bbb00252384e01e|5c6899ad.

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4038_20251018T214519.997259Z.json***REGULATORY-RUN ID:** 009**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4038* **UTC:** 20251018T214519.997259Z**SHA-256:** 5af54564b05e7ae9c8e6b4c918ca19586ca3c7e58af6b72806fa08603b27e844**RIPEMD-160:** fb5e9fa9e3873fe2236eaf1c60c4fc7dd0968c5a**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4038_20251018T214519.997259Z.hash.ots***OTS SHA-256:** 40f3a9bf146ba3294bf682eeb260bfbe7eb3813c9f313660fcd89499c518b33*Non_Evidence_Screenshot 2025-11-09 at 8.47.11 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-18T22:13:43Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "11fb255046a7934e5c978b3d0887318f85af3324b040873ce6026fea6c8af13d", "height": 919720, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4038", "payload": "SENTINEL|SESSION|fb5e9fa9e3873fe2236eaf1c60c4fc7dd0968c5a|5af54564", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4038_11fb255046a7934e5c978b3d0887318f85af3324b040873ce6026fea6c8af13d_919720.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4038_20251018T220557.638396Z.json"}
```

Evidence File:*ts_01_19_48_session_log_AuditLogAI.REG.GlobalSubmission.v4038_blockchain.com____20251104T231150Z.png*

Blockchain.com

Transaction: 11fb255046a7934e5c978b3d0887318f85af3324b040873ce6026fea6c8af13d

Bitcoin Transaction

Broadcasted on 19 Oct 2025 09:16:23 GMT+11

Hash ID: 11fb255046a7934e5c978b3d0887318f85af3324b040873ce6026fea6c8af13d

Amount: 0.00036312 BTC • \$38.13

Fee: 1,512 SATS • \$1.59

From: bctpz-3pts5 2 Outputs

To: bctpz-3pts5 2 Outputs

Confirmed

This transaction has 2,421 Confirmations. It was mined in Block 919,720

This transaction is efficient, no issues detected.

Decoded OP_Return

SENTINEL|SESSION|fb5e9fa9e3873fe2236eaf1c60c4fc7dd0968c5a|5af54564

Summary

This transaction was first broadcasted on the Bitcoin network on October 19, 2025 at 09:16 AM GMT+11. The transaction currently has 2,421 confirmations on the network. The current value of this transaction is now \$38.13.

Advanced Details

Hash	11fb-13d	Block ID	919,720
Position	73	Time	19 Oct 2025 09:16:23
Age	16d 8h 5m 55s	Inputs	1
Input Value	0.00037824 BTC	Outputs	2
	\$39.72	Output Value	0.00036312 BTC
Fee	0.00001512 BTC		\$38.13
	\$1.59	Fee/B	6.326 sat/B
Fee/VB	8.043 sat/vByte	Size	239 Bytes
Weight	752	Weight Unit	2.011 sat/WU
Coinbase	No	Witness	Yes
RBF	No	Locktime	0
Version	2	BTC Price	\$105,017

Overview **JSON**

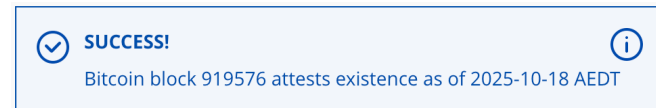
From: 1 bctpz-3pts5 2 Outputs 0.00037824 BTC • \$39.72

To: 1 Unknown 0.00000000 BTC • \$0.00

2 bctpz-3pts5 2 Outputs 0.00036312 BTC • \$38.13

Explore top crypto assets.

Wrapped Bitcoin WBTC, Convex Finance CVX, eCash XEC, ApeCoin APE, Moonbeam GLMR, Helium HNT, Algorand ALGO, Ethereum ETH, Bitcoin Cash BCH

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4034_20251018T001855.666955Z.json***REGULATORY-RUN ID:** 008**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4034* **UTC:** *20251018T001855.666955Z***SHA-256:** ef6556d6a4b9d035a5f100560ab3ce17f10024551e3c0955f42b1f871496eae4**RIPEMD-160:** 6fc7fef1cb6734cd5a3bb1147c25b756e9a41669**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4034_20251018T001855.666955Z.hash.ots***OTS SHA-256:** **ced3a64a8d68445def3de91e0b9f2e94e9472934308c30c83cc7f861729079ab***Non_Evidence_Screenshot 2025-11-09 at 8.49.26 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-18T00:23:46Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "e92162d1ac6f56915d51a0b1435f1d203de98b3f102f92b2bc6052eec56e3d72", "height": 919569, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4034", "payload": "SENTINEL|SESSION|6fc7fef1cb6734cd5a3bb1147c25b756e9a41669|ef6556d6", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4034_e92162d1ac6f56915d51a0b1435f1d203de98b3f102f92b2bc6052eec56e3d72_919569.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4034_20251018T002015.559286Z.json"}
```

Evidence File:*ts_01_20_03_session_log_AuditLogAI.REG.GlobalSubmission.v4034_blockchain.com____2025104T231150Z.png*

Blockchain.com e92162d1ac6f56915d51a0b1435f1d203de98b3f102f92b2bc6052eec56e3d72

Bitcoin Transaction

Hash ID: e92162d1ac6f56915d51a0b1435f1d203de98b3f102f92b2bc6052eec56e3d72

Amount: 0.00037824 BTC • \$39.72
Fee: 1,512 SATS • \$1.59

From: bctp5-2nnqg
To: 2 Outputs

Confirmed

This transaction has 2,572 Confirmations. It was mined in Block 919,569

This transaction is efficient, no issues detected.

Decoded OP_Return
SENTINEL|SESSION|6fc7fef1cb6734cd5a3bb1147c25b756e9a41669|ef6556d6

Summary

This transaction was first broadcasted on the Bitcoin network on October 18, 2025 at 11:23 AM GMT+11. The transaction currently has 2,572 confirmations on the network. The current value of this transaction is now \$39.72.

Advanced Details

Hash	e921-3d72	Block ID	919,569
Position	48	Time	18 Oct 2025 11:23:29
Age	17d 5h 59m 4s	Inputs	1
Input Value	0.00039336 BTC	Outputs	2
Fee	\$41.31	Output Value	0.00037824 BTC
Fee/KB	0.00001512 BTC		\$39.72
Weight	\$1.59	Fee/B	6.326 sat/B
Weight	8.043 sat/vByte	Size	239 Bytes
Coinbase	No	Weight Unit	2.011 sat/WU
RBF	No	Witness	Yes
Version	2	Locktime	0
		BTC Price	\$105,017

From

- 1 bctp5gqg9m6k8n@hejw4k8mdrvy7i7p6s4f9e3f6442pkd... 0.00039336 BTC • \$41.31

To

- 1 bctpdy8stgq887urfz7ymdv4qdhmayrkjckp8xjoi8... 0.00037824 BTC • \$39.72
- 2 Unknown 0.00000000 BTC • \$0.00

Explore top crypto assets.

Terra Classic LUNC, Neutrino USD USDN, Polygon MATIC, USD Coin USDC, Mina MINA, Filecoin FIL, eCash XEC, Stacks STX, Tether USDT, AuditLog.AI

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z.json***REGULATORY-RUN ID:** 007**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4030* **UTC:** *20251017T203831.645892Z***SHA-256:** 940277234a4293031780c7e627355221924b373f285212fd5baa1cff14568398**RIPEMD-160:** ab212c3fb3a90d46bd09601574fdb69f92956075**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z.hash.ots***OTS SHA-256:** **2e88723a6a1db6fd73675a29ec94b6aee07dc6c809d363edd349a2d2b213805b**

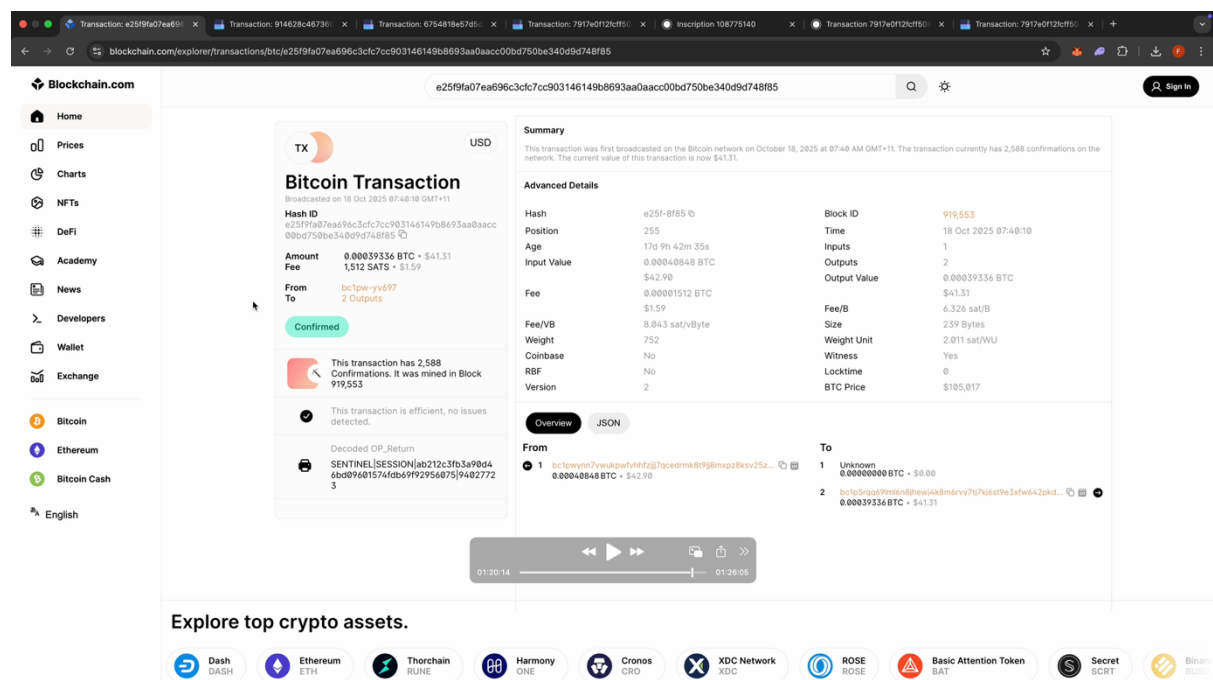
 **SUCCESS!**

Bitcoin block 919559 attests existence as of 2025-10-18 AEDT



*Non_Evidence_Screenshot 2025-11-09 at 8.51.20 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-17T20:49:57Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "e25f9fa07ea696c3cfc7cc903146149b8693aa0aacc00bd750be340d9d748f85", "height": 919553, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4030", "payload": "SENTINEL|SESSION|ab212c3fb3a90d46bd09601574fdb69f92956075|94027723", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4030_e25f9fa07ea696c3cfc7cc903146149b8693aa0aacc00bd750be340d9d748f85_919553.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203945.538832Z.json"}
```

Evidence File:*ts_01_20_14_session_log_AuditLogAI.REG.GlobalSubmission.v4030_blockchain.com__20251104T231150Z.png*

The screenshot shows the Blockchain.com explorer interface for a Bitcoin transaction. The transaction is confirmed and has 2,588 confirmations. The details include the hash, amount, fee, and outputs. The transaction is anchored to a specific block and has a receipt.

Field	Value
Hash ID	e25f9fa07ea696c3cfc7cc903146149b8693aa0aacc00bd750be340d9d748f85
Amount	0.00039336 BTC • \$41.31
Fee	1,512 SATS • \$1.59
From	bc1pw-yv497
To	2 Outputs
Decoded OP_Return	SENTINEL SESSION ab212c3fb3a90d46bd09601574fdb69f92956075 94027723

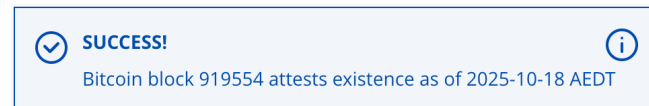
Summary: This transaction was first broadcasted on the Bitcoin network on October 18, 2025 at 07:48 AM GMT+11. The transaction currently has 2,588 confirmations on the network. The current value of this transaction is now \$41.31.

Advanced Details:

Field	Value
Hash	e25f-8f85 0
Position	255
Age	17d 9h 42m 35s
Input Value	0.00040848 BTC
Fee	\$42.90
Fee/B	0.00001512 BTC
Weight	1,512
Weight Unit	8.043 sat/vbyte
Witness	Yes
Locktime	0
BTC Price	\$105,017

Outputs:

To	Value
1 Unknown	0.00000000 BTC • \$0.00
2 bc1pSqg59m5n8Bhewik4Bm9v7U7k6at9eSufw442pkd...	0.00039336 BTC • \$41.31

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202205.834235Z.json***REGULATORY-RUN ID:** 006**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4026* **UTC:** *20251017T202205.834235Z***SHA-256:** bc48e033cb27fc960620a2828821561b6817df140a5669700426384a23bba85e**RIPEMD-160:** 1f8661d7186f7721de804ebff1a18ab60c8113f0**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202205.834235Z.hash.ots***OTS SHA-256:** **0e14659d22a2cd6c981a75a03c8458276c111cfd2142bfb3ce6c5ced602f3c44***Non_Evidence_Screenshot 2025-11-09 at 8.53.28 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-17T20:30:26Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source":  
"confirm_watcher_queue", "chain": "btc", "txid":  
"c86c7937da836997f4d2d0a9e23104ad519fe3eff5ddee25dbcbe592c2977d15", "height": 919552,  
"confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4026", "payload":  
"SENTINEL|SESSION|1f8661d7186f7721de804ebff1a18ab60c8113f0|bc48e033", "receipt":  
"receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4026_c86c7937da836997f4d2d0a9e23104ad519fe3eff5ddee25dbcbe592c2977d15_919552.json", "tier": "CR0", "unit_price_usd": 150, "source_job":  
"incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202430.733520Z.json"}
```

Evidence File:*ts_01_20_26_session_log_AuditLogAI.REG.GlobalSubmission.v4026_blockchain.com__20251104T231150Z.png*

A screenshot of the Blockchain.com explorer showing a Bitcoin transaction. The transaction ID is c86c7937da836997f4d2d0a9e23104ad519fe3eff5ddee25dbcbe592c2977d15. The transaction is confirmed and has 2,589 confirmations. The amount is 0.00040848 BTC, valued at \$42.90. The fee is 1,512 SATS, valued at \$1.59. The transaction is from bc1pdp-qt4dw to 2 outputs. The transaction is efficient with no issues detected. The decoded OP_RETURN is SENTINEL|SESSION|1f8661d7186f7721de804ebff1a18ab60c8113f0|bc48e033. The transaction was first broadcasted on the Bitcoin network on October 18, 2025, at 8:24 AM GMT+11. The transaction currently has 2,589 confirmations on the network. The current value of this transaction is now \$42.90. The transaction details include Hash, Position, Age, Input Value, Fee, Fee/VB, Weight, Coinbase, RBF, Version, Block ID, Time, Inputs, Outputs, Output Value, Fee/B, Size, Weight Unit, Witness, Locktime, and BTC Price. The transaction is confirmed and has 2,589 confirmations. The decoded OP_RETURN is SENTINEL|SESSION|1f8661d7186f7721de804ebff1a18ab60c8113f0|bc48e033. The transaction was first broadcasted on the Bitcoin network on October 18, 2025, at 8:24 AM GMT+11. The transaction currently has 2,589 confirmations on the network. The current value of this transaction is now \$42.90. The transaction details include Hash, Position, Age, Input Value, Fee, Fee/VB, Weight, Coinbase, RBF, Version, Block ID, Time, Inputs, Outputs, Output Value, Fee/B, Size, Weight Unit, Witness, Locktime, and BTC Price. Below the transaction details, there is a section for "Explore top crypto assets" with various icons for different cryptocurrencies like Decred, Harmony, Elrond, Internet Computer, Avalanche, Pax Dollar, Quant, Arweave, Litecoin, and PancakeSwap.

Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200606.551974Z.json

REGULATORY-RUN ID: 005

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4020* **UTC:** *20251014T200606.551974Z*

SHA-256: 5c009fb3e680ca41e0e17aefe3bc931ec00b195e8faa0eb3f546d059930b0724

RIPEMD-160: 041cf98418a6ae39dbcc5d3e49e60a06a5112993

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200606.551974Z.hash.ots

OTS SHA-256: **c26576aaa708bdb17285f011d1d9c7880a3e5f8f334d2a64ebc2511bf2f12c2a**



SUCCESS!

Bitcoin block 919084 attests existence as of 2025-10-15 AEDT

Non_Evidence_Screenshot 2025-11-09 at 8.55.30 am

AMPLIFY LEDGER excerpt:

```
{ "ts": "2025-10-14T20:10:25Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "d096197e02a8f1ac9ca7da43d353f109fe4ff72f6ae7f88b39c83877247e9ef7", "height": 919084, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4020", "payload": "SENTINEL|SESSION|041cf98418a6ae39dbcc5d3e49e60a06a5112993|5c009fb3", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4020_d096197e02a8f1ac9ca7da43d353f109fe4ff72f6ae7f88b39c83877247e9ef7_919084.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200812.994407Z.json" }
```

Evidence File:

ts_01_20_39_session_log_AuditLogAI.REG.GlobalSubmission.v4020_blockchain.com__20251104T231150Z.png

Blockchain.com

Transaction: d096197e02a8f1ac9ca7da43d353f109fe4ff72f6ae7f88b39c83877247e9ef7

Bitcoin Transaction

Broadcasted on 15 Oct 2025 07:10:03 GMT+11

Hash ID: d096197e02a8f1ac9ca7da43d353f109fe4ff72f6ae7f88b39c83877247e9ef7

Amount: 0.00042360 BTC • \$44.49

Fee: 1,512 SATS • \$1.59

From: bc1p8-tvx22

To: 2 Outputs

Confirmed

This transaction has 3,057 confirmations. It was mined in Block 919,084.

This transaction is efficient, no issues detected.

Decoded OP_Return: SENTINEL|SESSION|041cf98418a6ae39dbcc5d3e49e60a06a5112993|5c009fb3

Summary

This transaction was first broadcasted on the Bitcoin network on October 15, 2025 at 07:10 AM GMT+11. The transaction currently has 3,057 confirmations on the network. The current value of this transaction is now \$44.49.

Advanced Details

Hash	d096-9ef7 0	Block ID	919,084
Position	84	Time	15 Oct 2025 07:10:03
Age	20d 10h 13m 7s	Inputs	1
Input Value	0.00043872 BTC	Outputs	2
Fee	\$44.67	Output Value	0.00042360 BTC
Fee/B	0.00001512 BTC		\$44.49
Weight	\$1.59	Fee/B	6.326 sat/B
Weight	8.043 sat/vbyte	Size	239 Bytes
Weight	752	Weight Unit	2.011 sat/WU
Weight	No	Witness	Yes
Weight	No	Locktime	0
Weight	2	BTC Price	\$105,017

Overview **JSON**

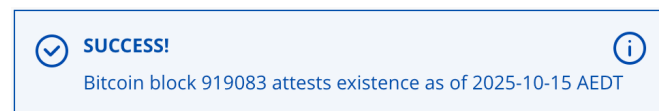
From: 1 bc1p8-tvx22 0.00043872 BTC • \$44.67

To: 1 Unknown 0.00000000 BTC • \$0.00

2 bc1p8-tvx22 0.00042360 BTC • \$44.49

Explore top crypto assets.

Sandbox SAND Zilliqa ZIL Kyber Network Crystal KNC Mina MINA NEO NEO BitTorrent token BTT Pancake Swap CAKE Holo HOT Harmony ONE

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4016_20251014T194515.612758Z.json***REGULATORY-RUN ID:** 004**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4016* **UTC:** *20251014T194515.612758Z***SHA-256:** 2b44af1d4888f598c89dec992b6ce31d6fc0daab7a2480a3efb07d44bf3eb055**RIPEMD-160:** f63523aba83a6b47c8fbb5dd942d20ef6aa7ee3e**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4016_20251014T194515.612758Z.hash.ots***OTS SHA-256:** **c6df3b2bf6a8b3e13c40f2139f61b2dd7440b8e2a10a321c86b891b3626c2c0b***Non_Evidence_Screenshot 2025-11-09 at 8.57.16 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-14T19:54:44Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source":  
"confirm_watcher_queue", "chain": "btc", "txid":  
"9a46014d657726798449cc6282de083e2084afc87aa5f23233903396d73b8d4f", "height": 919082,  
"confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4016", "payload":  
"SENTINEL|SESSION|f63523aba83a6b47c8fbb5dd942d20ef6aa7ee3e|2b44af1d", "receipt":  
"receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4016_9a46014d657726798449cc6282de083e2084a  
fc87aa5f23233903396d73b8d4f_919082.json", "tier": "CR0", "unit_price_usd": 150, "source_job":  
"incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4016_20251014T195206.714055Z.json"}
```

Evidence File:*ts_01_20_52_session_log_AuditLogAI.REG.GlobalSubmission.v4016_blockchain.com__2025104T231150Z.png*

Blockchain.com 9a46014d657726798449cc6282de083e2084afc87aa5f23233903396d73b8d4f

Bitcoin Transaction
Broadcast on 15 Oct 2025 06:53:28 GMT+11

Hash ID
9a46014d657726798449cc6282de083e2084afc87aa5f23233903396d73b8d4f

Amount
0.00043872 BTC • \$46.87
1,512 SATS • \$1.59

Fee
\$47.66

From
To bc1p9-ncyw6 2 Outputs

Confirmed

This transaction has 3,059 Confirmations. It was mined in Block 919,082

This transaction is efficient, no issues detected.

Decoded OP_Return
SENTINEL|SESSION|f63523aba83a6b47c8fbb5dd942d20ef6aa7ee3e|2b44af1d

Summary
This transaction was first broadcast on the Bitcoin network on October 15, 2025 at 06:53 AM GMT+11. The transaction currently has 3,059 confirmations on the network. The current value of this transaction is now \$46.87

Advanced Details

Hash	9a46-8d4f 0	Block ID 919,082
Position	41	Time 15 Oct 2025 06:53:28
Age	28d 10h 29m 55s	Inputs 1
Input Value	0.00045384 BTC	Outputs 2
Fee	\$47.66	Output Value 0.00043872 BTC
Fee/B	0.00001512 BTC	Fee/B \$46.87
Fee/VB	\$1.59	Size 6,326 sat/B
Weight	8,043 sat/vByte	Weight Unit 239 Bytes
Coinbase	No	Witness Yes
RBF	No	Locktime 0
Version	2	BTC Price \$185,017

Overview **JSON**

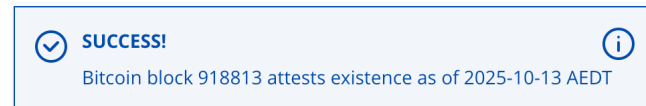
From
1 bc1p9mewjrmvwhh5a3vmdr223pud2ed85ngfns5x86... 0.00045384 BTC • \$47.66

To
1 bc1p9mewjrmvwhh5a3vmdr223pud2ed85ngfns5x86... 0.00043872 BTC • \$46.87
2 Unknown 0.00000000 BTC • \$0.00

01:20:52 01:26:05

Explore top crypto assets.

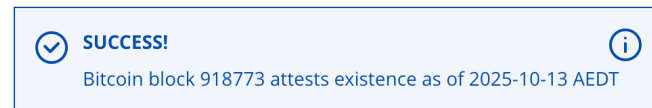
ROSE ROSE Internet Computer ICP Binance USD BUSD Shiba Inu SHIB Sandbox SAND Aave AAVE USD Coin USDC Curve DAO Token CRV Quant QNT

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034508.120256Z.json***REGULATORY-RUN ID:** 003**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4009* **UTC:** *20251013T034508.120256Z***SHA-256:** 862010c85fda0bfb02be23bb4316eea13966d374e60baa271f6292ef9416604b**RIPEMD-160:** 7e37072aeb1f857fb3245d9cdadc80356ff8563f**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034508.120256Z.hash.ots***OTS SHA-256:** **aa327f72e2799c98a4f1ea5ff83cda1fc2cf4b9670d90072d865f9cfa53d6bfd***Non_Evidence_Screenshot 2025-11-09 at 8.58.48 am***AMPLIFY LEDGER excerpt:**

```
{"ts": "2025-10-13T04:17:39Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "413a692f24f58970cf72fdabec58095d2b7599b5cb1325303cc6d19ec89ddb01", "height": 918808, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4009", "payload": "SENTINEL|SESSION|7e37072aeb1f857fb3245d9cdadc80356ff8563f|862010c8", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4009_413a692f24f58970cf72fdabec58095d2b7599b5cb1325303cc6d19ec89ddb01_918808.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034642.343523Z.json"}
```

Evidence File:*ts_01_21_04_session_log_AuditLogAI.REG.GlobalSubmission.v4009_blockchain.com__20251104T231150Z.png*

A screenshot of the Blockchain.com explorer showing a Bitcoin transaction. The transaction is confirmed and has 3,333 confirmations. The amount is 0.00045384 BTC, and the fee is 1,512 SATS. The transaction is anchored to a block with ID 918,808. The screenshot also shows a sidebar with navigation links and a bottom section for exploring top crypto assets.

Session Log File:*session_log_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204520.780899Z.json***REGULATORY-RUN ID:** 002**Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4005* **UTC:** *20251012T204520.780899Z***SHA-256:** 7c61fb5ed56a98ae79a8dcf55d582b4d9200596daa4080d37c08cfe86a8e4bcb**RIPEMD-160:** 5c5635ccbed45827cd437b67c60020742cc19c1b**Independent time attestation - OpenTimestamps.org:****OTS Proof:***session_log_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204520.780899Z.hash.ots***OTS SHA-256:** **272dc558efd701e50b4bd63eca1d9008cc2efa449de9f8053294027e74010877***Non_Evidence_Screenshot 2025-11-09 at 9.00.36 am***AMPLIFY LEDGER excerpt:**

```
{
  "ts": "2025-10-12T20:49:42Z",
  "event": "ANCHORED_RECEIPT_WRITTEN",
  "source": "confirm_watcher_queue",
  "chain": "btc",
  "txid": "02f71288b6f45b9527ccf8714e4d1bfa697dbb45bcd83bb93a451c81cce439c",
  "height": 918772,
  "confirmations": 1,
  "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4005",
  "payload": "SENTINEL|SESSION|5c5635ccbed45827cd437b67c60020742cc19c1b|7c61fb5e",
  "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4005_02f71288b6f45b9527ccf8714e4d1bfa697dbb45bcd83bb93a451c81cce439c_918772.json",
  "tier": "CR0",
  "unit_price_usd": 150,
  "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204707.939845Z.json"
}
```

Evidence File:*ts_01_21_16_session_log_AuditLogAI.REG.GlobalSubmission.v4005_blockchain.com__20251104T231150Z.png*

Blockchain.com Transaction: 02f71288b6f45b9527ccf8714e4d1bfa697dbb45bcd83bb93a451c81cce439c

Bitcoin Transaction
Broadcasted on 13 Oct 2025 07:47:33 GMT+11

Hash ID
02f71288b6f45b9527ccf8714e4d1bfa697dbb45bcd83bb93a451c81cce439c

Amount
0.00046896 BTC • \$49.25

Fee
1,512 SATS • \$1.59

From
bctpd-revgm

To
2 Outputs

Confirmed

This transaction has 3,369 Confirmations. It was mined in Block 918,772.

This transaction is efficient, no issues detected.

Decoded OP_Return
SENTINEL|SESSION|5c5635ccbed45827cd437b67c60020742cc19c1b|7c61fb5e

Summary
This transaction was first broadcasted on the Bitcoin network on October 13, 2025 at 07:47 AM GMT+11. The transaction currently has 3,369 confirmations on the network. The current value of this transaction is now \$49.25.

Advanced Details

Hash	02f7-439c	Block ID	918,772
Position	139	Time	13 Oct 2025 07:47:33
Age	22d 9h 36m 14s	Inputs	1
Input Value	0.00046808 BTC	Outputs	2
Fee	\$50.84	Output Value	0.00046896 BTC
Fee/VB	0.00001512 BTC	Fee/B	\$49.25
Weight	\$1.59	Size	6,326 sat/B
Weight	8,043 sat/vByte	Weight Unit	239 Bytes
Coinbase	No	Witness	Yes
RBF	No	Locktime	0
Version	2	BTC Price	\$105,017

Overview | **JSON**

From

- 1 bctpd4s32mm9kaywrfc02p8d8x8a2wc9R0az7ewm5... 0.00046808 BTC • \$50.84

To

- 1 bctpd4s32mm9kaywrfc02p8d8x8a2wc9R0az7ewm5... 0.00046896 BTC • \$49.25
- 2 Unknown 0.00000000 BTC • \$0.00

Explore top crypto assets.

Enjin ENJ, Binance Coin BNB, ROSE ROSE, Tether USDT, Axie Infinity Shards AXS, GateToken GT, Pancake Swap CAKE, Curve DAO Token CRV, Bitcoin BCT

Session Log File:

session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z.json

REGULATORY-RUN ID: 001

Meta ID: *AuditLogAI.REG.GlobalSubmission.v4001* **UTC:** *20251012T200455.617478Z*

SHA-256: 298787323e3b46f9975bb1856bbb9b6f2a8d5eb677c4d9a9c949382744c66dc7

RIPEMD-160: 9da9157e665088e67a2dfbda5cb7140c3895eec8

Independent time attestation - OpenTimestamps.org:

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z.hash.ots

OTS SHA-256: **272aed4d4de40272f8bfefabf103f30ef9f574b1a24ec49b185c5af0e5c7517ce**



SUCCESS!

Bitcoin block 918773 attests existence as of 2025-10-13 AEDT

Non_Evidence_Screenshot 2025-11-09 at 9.02.24 am

AMPLIFY LEDGER excerpt:

```
{"ts": "2025-10-12T20:17:41Z", "event": "ANCHORED_RECEIPT_WRITTEN", "source": "confirm_watcher_queue", "chain": "btc", "txid": "2ceecfb433f1f05d4023f2f45eacd2a0d4bbe18d6086063aa340f5c66a5e88a9", "height": 918769, "confirmations": 1, "session_meta_id": "AuditLogAI.REG.GlobalSubmission.v4001", "payload": "SENTINEL|SESSION|9da9157e665088e67a2dfbda5cb7140c3895eec8|29878732", "receipt": "receipt_anchored_AuditLogAI.REG.GlobalSubmission.v4001_2ceecfb433f1f05d4023f2f45eacd2a0d4bbe18d6086063aa340f5c66a5e88a9_918769.json", "tier": "CR0", "unit_price_usd": 150, "source_job": "incoming_anchor_AuditLogAI.REG.GlobalSubmission.v4001_20251012T201222.659253Z.json"}
```

Evidence File:

ts_01_21_29_session_log_AuditLogAI.REG.GlobalSubmission.v4001_blockchain.com__2025104T231150Z.png

The screenshot displays the Blockchain.com explorer interface for a Bitcoin transaction. The transaction is confirmed and shows details such as the Hash ID, Amount, Fee, and outputs. The interface includes a sidebar with navigation options and a bottom section for exploring top crypto assets.

Blockchain.com

Transaction: 2ceecfb433f1f05d4023f2f45eacd2a0d4bbe18d6086063aa340f5c66a5e88a9

Bitcoin Transaction

Broadcasted on 13 Oct 2025 07:14:18 GMT+11

Hash ID
2ceecfb433f1f05d4023f2f45eacd2a0d4bbe18d6086063aa340f5c66a5e88a9

Amount
0.00048408 BTC • \$58.84

Fee
1.592 SATS • \$1.67

From
bc1qj987g

To
2 Outputs

Confirmed

This transaction has 3,372 Confirmations. It was mined in Block 918,769

This transaction is efficient, no issues detected.

Decoded OP_Return
SENTINEL|SESSION|9da9157e665088e67a2dfbda5cb7140c3895eec8|29878732

Summary

This transaction was first broadcasted on the Bitcoin network on October 13, 2025 at 07:14 AM GMT+11. The transaction currently has 3,372 confirmations on the network. The current value of this transaction is now \$58.84.

Advanced Details

Hash	2cee-88a9 0	Block ID	918,769
Position	135	Time	13 Oct 2025 07:14:18
Age	22d 10h 9m 42s	Inputs	1
Input Value	0.00050000 BTC	Outputs	2
Fee	\$52.51	Output Value	0.00048408 BTC
Fee/B	0.00001592 BTC		\$58.84
Weight	1.67	Fee/B	5.686 sat/B
Weight/VB	8.000 sat/vByte	Size	280 Bytes
Weight	793	Weight Unit	2.008 sat/WU
Coinbase	No	Witness	Yes
RBF	No	Locktime	0
Version	2	BTC Price	\$185,017

Overview **JSON**

From

1 bc1qj987g2w7ykh8gcu8wqmpyzxdg5p7pa87g 0.00050000 BTC • \$52.51

To

1 Unknown 0.00000000 BTC • \$0.00

2 bc1pds3zpmn9k4ywfzcf82h8z8x8a2wec9h8az7ewdn5... 0.00048408 BTC • \$58.84

Explore top crypto assets.

Basic Attention Token BAT, Cosmos ATOM, Zcash ZEC, Stellar XLM, Shiba Inu SHIB, Harmony ONE, Neutrino USD USDN, Tronix TRX, Maker protocol MKR

Audit Target Files B1 Secondary (Official FDA Regulatory References)

Definition:

Official U.S. FDA regulatory guidance documents used as secondary reference sources for AuditLog.AI reproducibility validation.

Each file was independently hashed using dual-algorithm verification (**SHA-256 + RIPEMD-160**) and cross-checked against the manifest below.

Regulatory Reference Document:

*Part-11--Electronic-Records--Electronic-Signatures---Scope-and-Application-
(PDF)____20251020T193619Z.pdf*

SHA-256: 306013031df65004566799023444b3fd66d17dca72eea4c7eb5bacfd4a697ac5

RIPEMD-160: aa7b324fc0b70d87aa93f025aa8b880ba5423812

Purpose: Foundational FDA guidance (August 2003) defining the **scope, application, and enforcement discretion** of 21 CFR Part 11 for electronic records and electronic signatures across all regulated product areas.

Regulatory Reference Document:

58358119fnl____20251020T193619Z.pdf

SHA-256: f74ce1b061edfa634aaf0a0b07a472995a6d215f310a562e17ae46c0b67b47a6

RIPEMD-160: 106461fc6b6129eb44751d305723b687d82d3f92

Purpose: FDA Guidance for Industry (October 2024 Revision 1) — Electronic Systems, Electronic Records, and Electronic Signatures in Clinical Investigations: Questions and Answers. Provides current FDA guidance on **Part 11 compliance in clinical investigations**, covering validation, audit trails, digital health technologies, and risk-based oversight of CRO and IT systems.

Regulatory Reference Document:

21 CFR Part 11 (up to date as of 9-29-2025)____20251020T193619Z.pdf

SHA-256: a721cc9c5ad0f500f5b12397fd465035df7b07e8c7fe046f987c126b9ccdf6da

RIPEMD-160: fa447cdd3463a300f2914b778557d1b93887f91f

Purpose: Official eCFR text of **Title 21 Code of Federal Regulations Part 11**, establishing the **legally binding criteria** under which electronic records and electronic signatures are accepted as **trustworthy, reliable, and equivalent** to paper records and handwritten signatures.

Regulatory Reference Document:

7883441_DataIntegrity___20251020T193619Z.pdf

SHA-256: 1b5074c592ed75035022566b6e151c219b5b6349414beaf4229e73117a0997c6

RIPEMD-160: 666d647cf72cfd3943b2fb28551802d8d3f89209

Purpose: FDA Guidance for Industry (December 2018) — Data Integrity and Compliance With Drug CGMP: Questions and Answers Guidance for Industry.

Clarifies FDA expectations for **data integrity, audit trails, metadata, and record-keeping** under **Current Good Manufacturing Practice (CGMP)** regulations (21 CFR Parts 210, 211, and 212).

Manifest Reference:

All SHA-256 and RIPEMD-160 values for Audit Target Files B1 Secondary (Official FDA Regulatory References) are compiled in *manifest_VaultREGRefs_HumanVerified_REGULATORY-RUN-20251020-S08.csv*, included within the frozen **REGULATORY-RUN15 evidence archive**.

Audit Target Comparators

Definition:

This section defines the **reference sources and verification comparators** used to validate all AuditLog.AI payloads and Bitcoin-anchored transaction identifiers (TXIDs). Each comparator provides an independent verification layer ensuring transparency, reproducibility, and proof-of-existence of the audit artifacts.

Payload & Transaction ID (TXID) Sources

Master Ledger

Primary ledger of record for all Bitcoin-anchored transactions by AuditLog.AI.

Evidence File:

AMPLIFY_LEDGER_v.28Oct.25___20251104T063220Z.ndjson

SHA-256: b7a831ae99063cb7a9c6c2943383ff2c339736b52a821ebfa61762b5a66896cc

RIPEMD-160: df80982dab05f1cfb7bc066e5706a0bfeec4d773

Purpose: Contains complete events including **timestamp, session meta ID, TXID, payload, and block-height mapping** for all verified anchoring events; forms the **canonical proof chain for reproducibility audits**.

Public Blockchain Explorers

Each explorer provides an independent, publicly accessible reference for verification of the same TXIDs recorded in the AMPLIFY LEDGER.

Public Blockchain Explorer 1:

<https://www.blockchain.com/>

Purpose: General-purpose Bitcoin transaction and OP_RETURN payload verification interface.

Public Blockchain Explorer 2:

<https://mempool.space/>

Purpose: Real-time Bitcoin inscription and block explorer used to cross-verify confirmation status, block height, and timestamp consistency.

Public Blockchain Explorer 3:

<https://ordinals.com/>

Purpose: Specialized Ordinals explorer confirming inscription metadata and OP_RETURN payload linkage for Ordinal 11 and 12 anchors.

Positive Control Public Repositories

Definition:

Publicly accessible repositories that host canonical AuditLog.AI artifacts, enabling independent verification of reproducibility, provenance, and documentation integrity.

These repositories serve as **positive controls** by providing public mirrors of the same files, manifests, and evidence included in the frozen regulatory archive.

Public Repository 1:

<https://www.aihumansynergy.org/>

Purpose: Official AuditLog.AI and Sentinel QMS v4 public website hosting select validated documentation, regulatory summaries, and system architecture briefs for open-science verification and public transparency.

Public Repository 2:

<https://github.com/TELAISYN/AI-Human-Synergy>

Purpose: Open-access GitHub repository containing canonical source code, validation utilities, manifests, and version-controlled regulatory documentation to enable **independent reproducibility testing and cross-validation**.

Independent Positive Control Sources

Definition:

Independent, third-party hosted sources providing public mirrors of canonical AuditLog.AI and regulatory reference materials.

Each DOI or official publication link functions as a **positive control**, demonstrating reproducibility of anchoring, checksum parity, and open-science traceability beyond the internal frozen archive.

Ordinal 11 Independent Positive Control 1:

Zenodo: [10.5281/zenodo.17460850](<https://doi.org/10.5281/zenodo.17460850>)

Purpose: Independent Zenodo repository hosting the **Canonical Ordinal 11** public evidence package, confirming checksum parity, payload reproducibility, and timestamp integrity.

Ordinal 11 Independent Positive Control 2:

ResearchGate: [10.13140/RG.2.2.28551.25765](<https://doi.org/10.13140/RG.2.2.28551.25765>)

Purpose: Public ResearchGate archive of the **Ordinal 11 Validation Dossier**, establishing reproducibility of the same SHA-256 / RIPEMD-160 digests verified on Bitcoin mainnet.

Ordinal 12 Independent Positive Control:

Zenodo: [10.5281/zenodo.17462383](<https://doi.org/10.5281/zenodo.17462383>)

Purpose: Independent Zenodo record for the **Ordinal 12 Global Compliance Matrix**, confirming dual-hash integrity and alignment with the canonical AuditLog.AI regulatory submission series.

Regulatory References Independent Positive Control 1:

<https://www.fda.gov/media/166215/download>

Purpose: Public FDA link corresponding to the canonical **58358119fni** guidance document.

Regulatory References Independent Positive Control 2:

https://www.gmp-compliance.org/files/guidemgr/7883441_DataIntegrity.pdf

Purpose: Public FDA-linked GMP-Compliance mirror of the canonical **7883441_DataIntegrity** guidance.

Regulatory References Independent Positive Control 3:

<https://www.fda.gov/media/75414/download>

Purpose: Public FDA source link for the canonical **Part 11 – Electronic Records; Electronic Signatures** guidance.

Independent Negative Control Sources

Definition:

Independent third-party sources used to demonstrate expected **hash mismatches** resulting from controlled metadata or rendering-layer changes.

These negative controls confirm the **sensitivity and specificity** of the dual-hash verification process by **showing that both content and non-content metadata alterations are correctly detected as mismatches**.

Ordinal 12 Independent Negative Control (content):

ResearchGate: [10.13140/RG.2.2.22888.94726](<https://doi.org/10.13140/RG.2.2.22888.94726>)

Purpose: A **dual-hash mismatch** is expected due to **metadata page insertion** performed automatically by the *ResearchGate* platform.

Regulatory References Independent Negative Control (metadata):

<https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-11>

Purpose: A **dual-hash mismatch** is expected due to **de novo PDF generation and metadata insertion** by *ecfr.gov* during export. The discrepancy is limited to file-level metadata and does not represent a content change.

Fraud Detection Testing – Metadata Negative Control

Metadata-Level Negative Control Fraud Detection Demonstration Methodology

Description:

Controlled modifications were performed at the **metadata layer only** to demonstrate fraud-detection capabilities and reproducibility integrity. No changes were made to the file's substantive contents.

Procedure:

Edits were executed using the canonical utility:

auditlog.ai_metadata___20251104T063215Z.py

SHA-256: 60037da2c054d7b231736a23914a2d47b68b798b720843999c8691a395d1a862

RIPEMD-160: c30214bd2cca14865714d25b4c6fb5089840cfb8

Purpose: Although the file contents remain **identical**, a **hash mismatch is expected** due to controlled metadata-level alterations. This serves as a valid negative control for fraud detection and hash integrity validation.

Canonical Positive Control Sources

Definition:

Frozen evidence files were **manually duplicated** (copied and pasted) within the local file system. Only the **filename and storage location** changed; file bytes remained identical.

Method:

After manual duplication, **SHA-256** and **RIPEMD-160** hashes were recomputed and compared to the original.

Purpose: **Dual-hash match expected** (exact equality). Any mismatch would indicate modification beyond filename/path.

Additional Positive Controls (Executed in REGULATORY-RUN012)

Definition:

Additional positive control verifications executed under **REGULATORY-RUN012**, confirming reproducibility of previously anchored **frozen session logs** and **official FDA regulatory references**.

All files were rehashed using dual-algorithm verification (**SHA-256 + RIPEMD-160**) and compared against their original canonical digests to validate immutability across re-archival and duplication events.

Frozen Session Logs (REGULATORY-RUNs 1-11):

Re-verification of frozen session log archives from REGULATORY-RUNs 001 – 011. Each log was manually duplicated, frozen, and rehashed to confirm byte-level identity with the canonical ledger entries.

Evidence Files:

- *session_log_AuditLogAI.REG.GlobalSubmission.v4038_20251018T214519.997259Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4034_20251018T001855.666955Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200606.551974Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034508.120256Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204520.780899Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085338.849295Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4016_20251014T194515.612758Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194225.497227Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202205.834235Z___20251026T094829Z.json*
- *session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z___20251026T094829Z.json*

Manifest Reference:

All SHA-256 and RIPEMD-160 digests for these session logs are compiled in *manifest_AUDIT_frozen_sources_REGULATORY-RUN-20251026-S02.csv*, included within the frozen **REGULATORY-RUN15 evidence archive**.

Official FDA Regulatory References:

Re-verification of canonical U.S. FDA reference files used for cross-validation of regulatory integrity and document provenance within the AuditLog.AI Global Compliance Matrix.

Evidence Files:

- *HV_TELLES_58358119fnl_Canonical____20251026T085116Z.pdf*
- *HV_TELLES_Part-11--Electronic-Records--Electronic-Signatures---Scope-and-Application-(PDF)_Canonical____20251026T085116Z.pdf*
- *HV_TELLES_7883441_DataIntegrity_Canonical____20251026T085116Z.pdf*
- *HV_TELLES_21 CFR Part 11 (up to date as of 9-29-2025)_Canonical____20251026T085116Z.pdf*

Manifest Reference:

All SHA-256 and RIPEMD-160 digests are compiled in *manifest_Global_Regulatory_Submission_BuildFiles_REGULATORY-RUN-20251026-S18.csv*, included within the frozen **REGULATORY-RUN15 evidence archive**.

AUDIT RESULTS

Definition:

All evidence packages were verified using the **dual-hash public verification toolset**. Validated outputs for each audit stream were automatically exported to hash_audit_report.csv within the corresponding evidence directory, included within the frozen REGULATORY-RUN15 evidence archive.

Pre- and Post-Execution Evidence (Human + System Validation Layers)

Definition:

This section provides visual confirmation of both the **human-verified execution environment** and the **system-logged batch state** captured during the **04 November 2025 reproducibility audit**.

Together, these frames constitute the **Tier 1 (Human)** and **Tier 2 (System)** validation layers that establish provenance integrity for this audit cycle.

Tier 1 — Human Execution Screenshots

Audit Status: **PASS**

• **Human-executed** reproducibility validation confirmed

Verifier: *Dr. Fernando Telles*

Pre- Human Audit Execution Screenshot

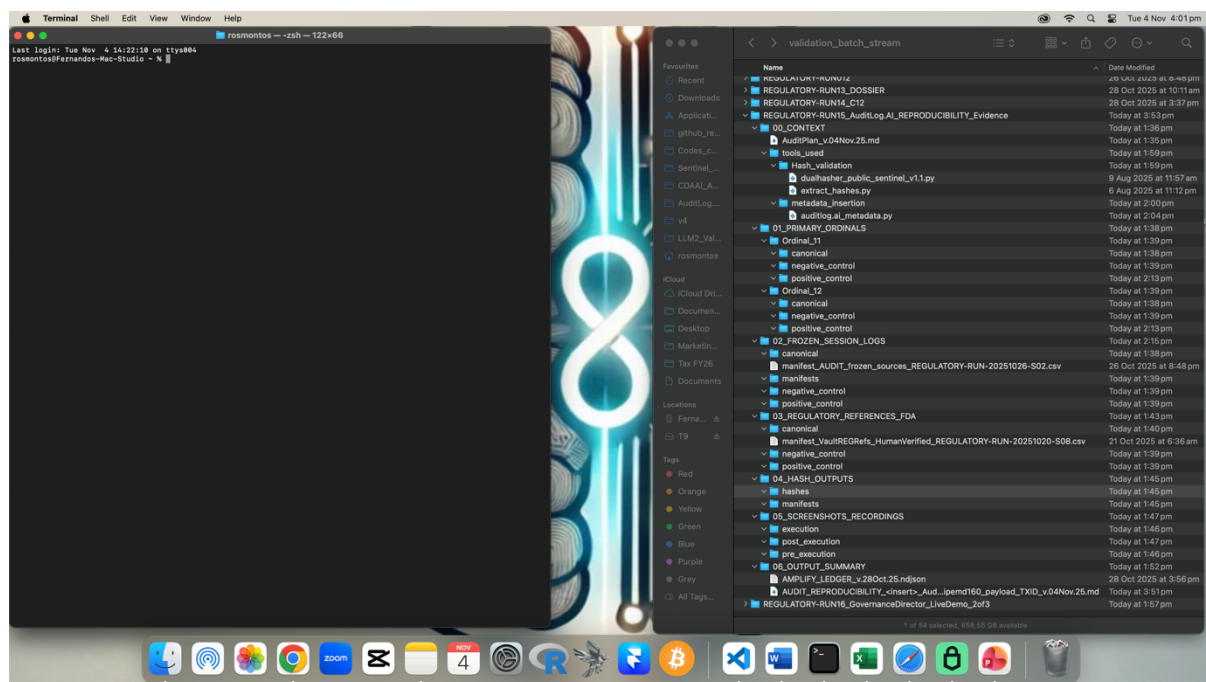
Evidence File:

Screenshot 2025-11-04 at 4.01.13pm___20251104T063220Z.png

Description: Pre-execution screenshot captured immediately prior to human audit initiation.

Observation: Displays terminal idle state and prepared validation directories, confirming controlled start conditions.

Outcome: Baseline human-audit environment verified – **PASS**.



Post- Human Audit Execution Screenshot

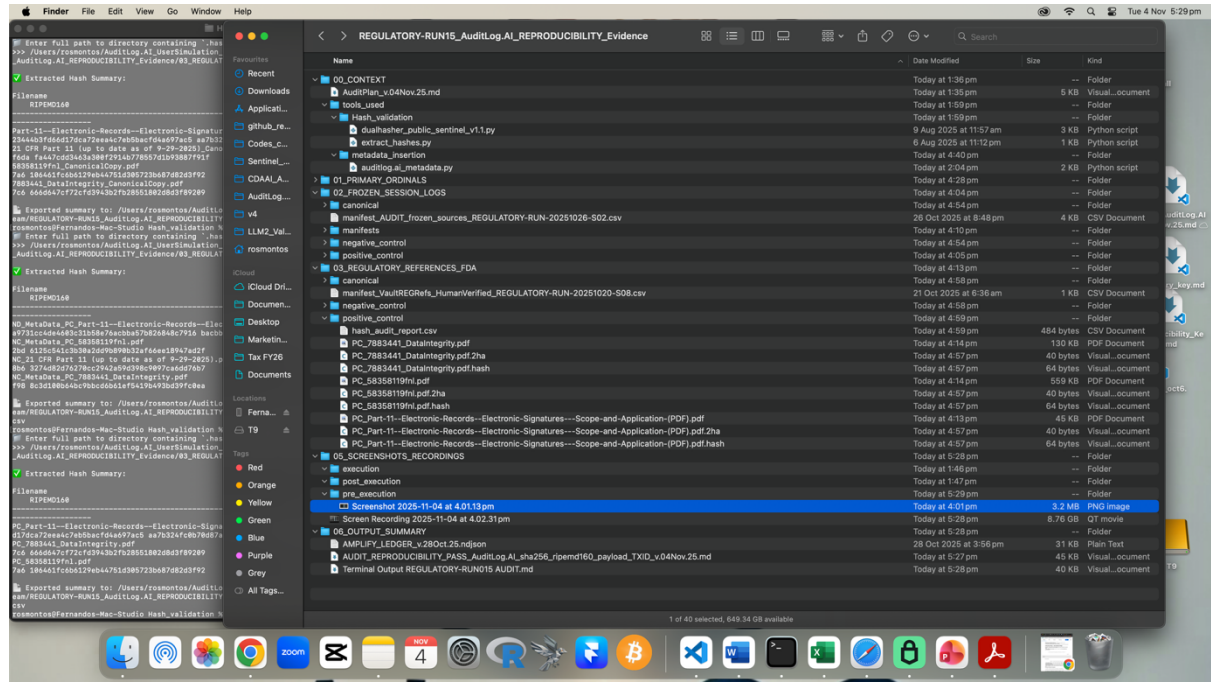
Evidence File:

Screenshot 2025-11-04 at 5.29.15pm____20251104T063215Z.png

Description: Post-execution screenshot captured immediately following completion of human audit sequence.

Observation: Shows validated outputs, exported reports, and updated evidence directories confirming full audit cycle completion.

Outcome: Human-audit session concluded successfully – **PASS**.



Tier 2 — System-Generated Batch Screenshots (REGULATORY-RUN-015)

Audit Status: **PASS**

- Baseline environment integrity confirmed
- All manifest CSV files for REGULATORY-RUN-015 registered
- Controlled execution confirmed within $\Delta \leq 300$ seconds threshold

Verifier: Dr. Fernando Telles

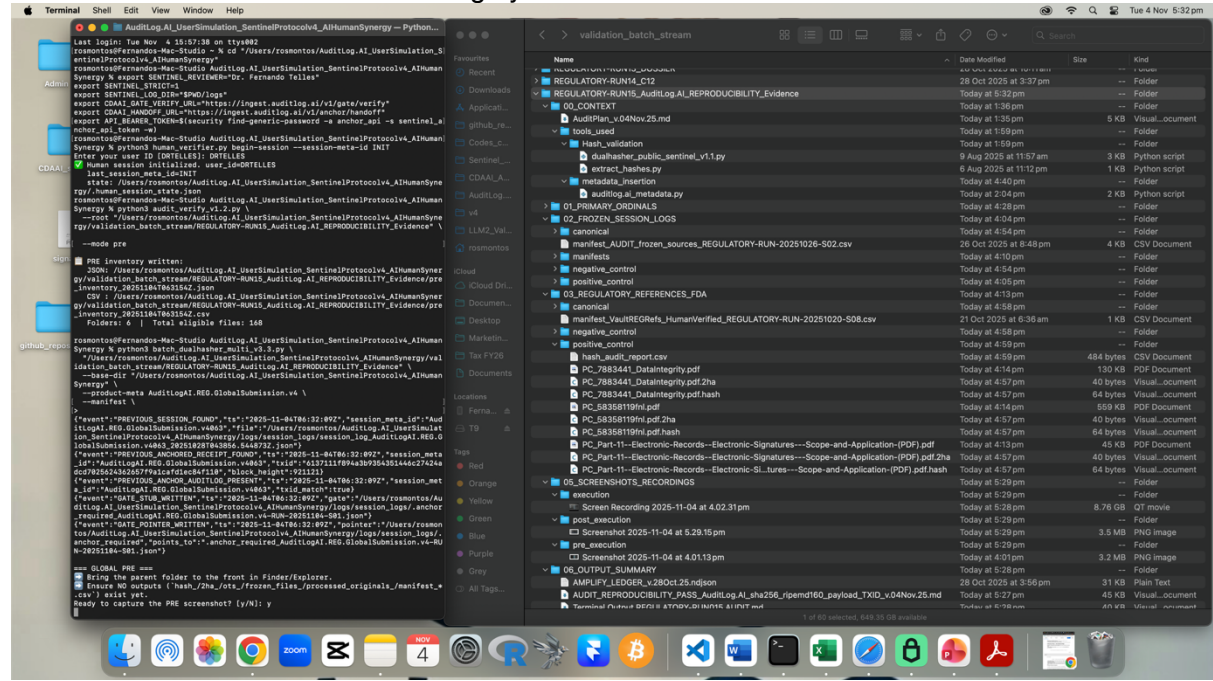
Pre-Hashing Execution Screenshot

Evidence File: *PRE_20251104T063214Z*

Description: System-captured screenshot recording the **PRE** state immediately before hashing begins (human authorization for capture is mandatory).

Observation: Environment baseline recorded showing pre-inventory audit, files queued for processing, and timestamp metadata.

Outcome: Baseline environment integrity confirmed – **PASS**.



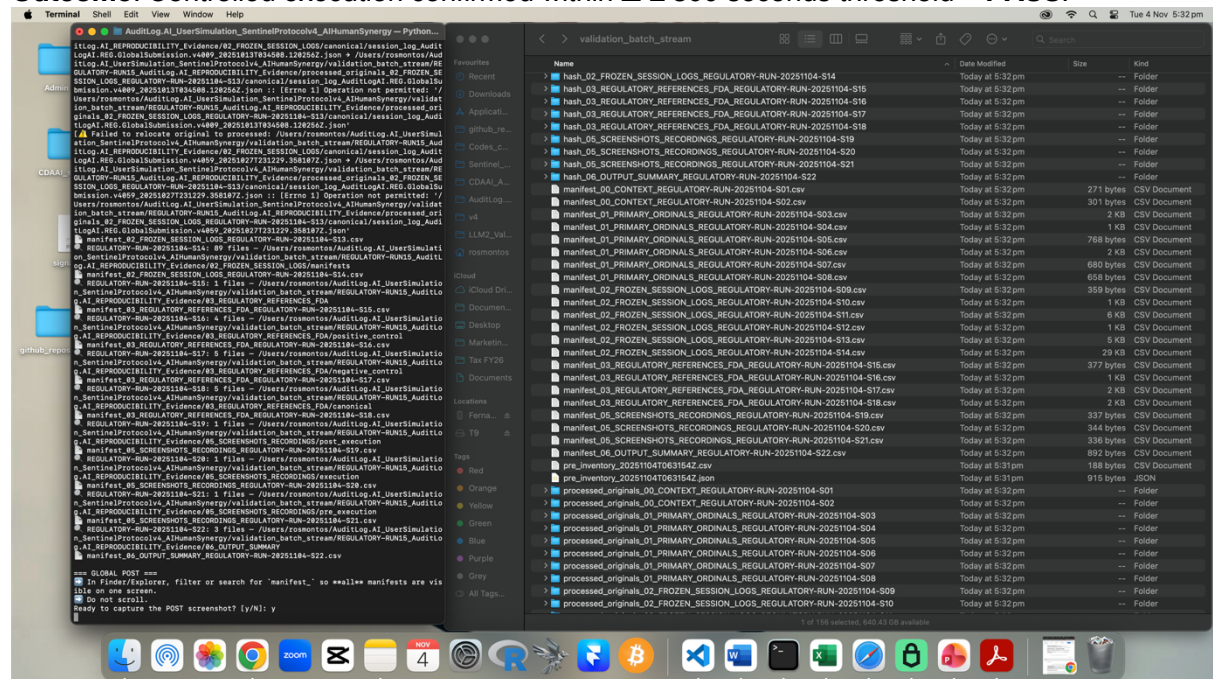
Post-Hashing Execution Screenshot

Evidence File: *POST_20251104T063226Z*

Description: System-captured screenshot following dual-hasher execution.

Observation: All manifest CSV files for REGULATORY-RUN-015 registered, compiling SHA-256 and RIPEMD-160 digests for all frozen evidence files in this audit.

Outcome: Controlled execution confirmed within $\Delta \leq 300$ seconds threshold – **PASS**.



Reference Note:

The Tier 2 screenshots were automatically captured by AuditLog.AI under **REGULATORY-RUN-015**. The accompanying *session_global_REGULATORY-RUN-20251104.json* file was generated immediately after the post-execution capture and hashing.

It serves as a lightweight session manifest linking the paired PRE and POST screenshots, their SHA-256 / RIPEMD-160 digests, and UTC capture times.

Session global contents:

```
```json
```

```
{
 "run_id": "REGULATORY-RUN-20251104",
 "session_context": "AuditLog.AI.REG.GlobalSubmission.v4-RUN-20251104-S01",
 "pre": {"path":
"/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/frozen_sources/REGULATORY-RUN-20251104/screenshots/PRE_20251104T063214Z.png", "sha256":
"f7d7ed0fcfecddaa875a82108a778eec1790492cbb232aa668b576b3b8a2e2a2", "ripemd160_sha256":
"bccf680e86d6d93f22c99efd4270ef480bf239b7"},
 "post": {"path":
"/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/frozen_sources/REGULATORY-RUN-20251104/screenshots/POST_20251104T063226Z.png", "sha256":
"3421502e316ef3994fd9bf1606f1962b689a5fad1a5ee1b85fe29182397609bc", "ripemd160_sha256":
"44b720bdd1d0015dd09869aca7e2c922914671f"},
 "generated_at_utc": "20251104T063227Z"
}
```

## Relocation Warning Verification

**Description:** A non-blocking “Failed to relocate original to processed” warning was logged when the pipeline attempted to relocate Canonical Session Logs.

**Evidence File:** *Terminal\_Session\_v4059\_Warning\_Verification.md*

*Note:* Executed during post-hoc verification. Formal registration under **REGULATORY-RUN017**.

**Select CLI output excerpt:** (Full command log preserved in evidence file)

```
RUN-20251104-
S13/canonical/session_log_AuditLog.AI.REG.GlobalSubmission.v4059_20251027T231229.358107Z__202
51104T063215Z.json
-r--r--r-- 1 rosmontos staff uchg 38505 28 Oct 10:12
```

**Observation:**

1. **MacOS uchg (locally immutable) flags** were previously applied to canonical files during the original session processing (v4059 example: “-r--r--r-- 1 rosmontos staff uchg 38505 28 Oct 10:12”; timestamp 20251027T231229.358107Z). These immutable flags prevented file relocation during re-processing in RUN015, producing the warning.
2. As the files names were modified and VALIS-compliant, **CME Rule 4a (VALIS filename standard)** permitted dual-hashing to proceed as expected.
3. Canonical session logs were **successfully registered** in *manifest\_02\_FROZEN\_SESSION\_LOGS\_REGULATORY-RUN-20251104-S13.csv*
4. **Reproducibility confirmed:** canonical and positive-control artifacts are **byte-identical**. Only filenames and directory paths differ; **SHA-256 and RIPEMD-160 digests match**.

**Outcome:**

The warning reflects standard “frozen artifact” protections (uchg) applied by AuditLog.AI.

No impact on reproducibility, data integrity, CME Rule 4a (VALIS filename standard) compliance, or  $\Delta \leq 300$ -second threshold – **PASS**.



## 01 Primary Ordinals

### Ordinal 11 Canonical

#### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **match on CANONICAL** file

**Verifier:** *Dr. Fernando Telles*

#### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/canonical
[✓] Extracted Hash Summary:

Filename SHA256
RIPEMD160

AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier_CANONICAL.pdf
fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a
b0c8b2223eab705cac6bf7801b64945f7ed47022

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/canonical/hash_audit_report.csv
```

### Ordinal 11 Fraud Detection Testing Negative Control (metadata)

#### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **mismatch on Fraud Detection Testing (metadata)**

**Verifier:** *Dr. Fernando Telles*

#### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/negative_control
[✓] Extracted Hash Summary:

Filename SHA256
RIPEMD160

NC_MetaData_AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier.2.pdf
b2baa35a5f4f8eb5aaff80670f54bd478101923b84cebd06743c83b734a37fb1
561c59a1f27b79a5aafe399228c52c239422efdb

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/negative_control/hash_audit_report.csv
```

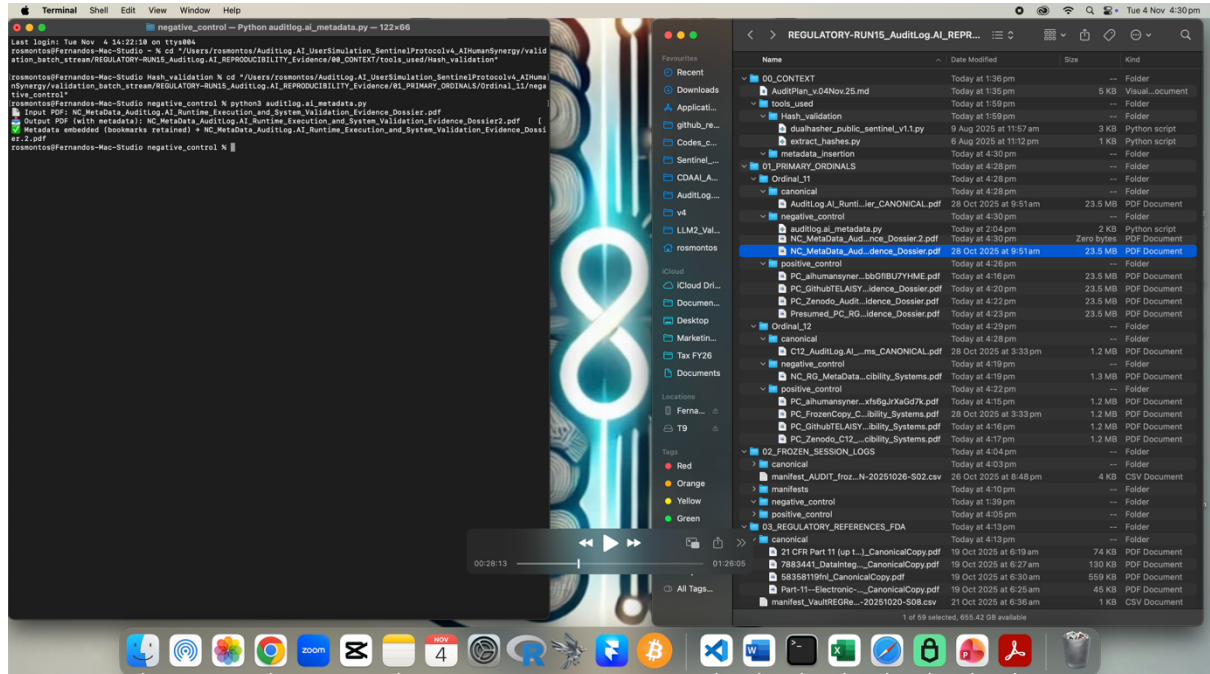
**Evidence File:**

*ts\_00\_28\_13\_ORDINAL11\_NC\_MetaData\_Insertion\_auditlog.ai\_metadata\_20251104T231150Z.png*

**Description:** Negative-control metadata insertion (tool view).

**Observation:** Shows provenance of meta insertion for Ordinal 11 copy.

**Outcome:** Integrity validation – **PASS** (expected mismatch).

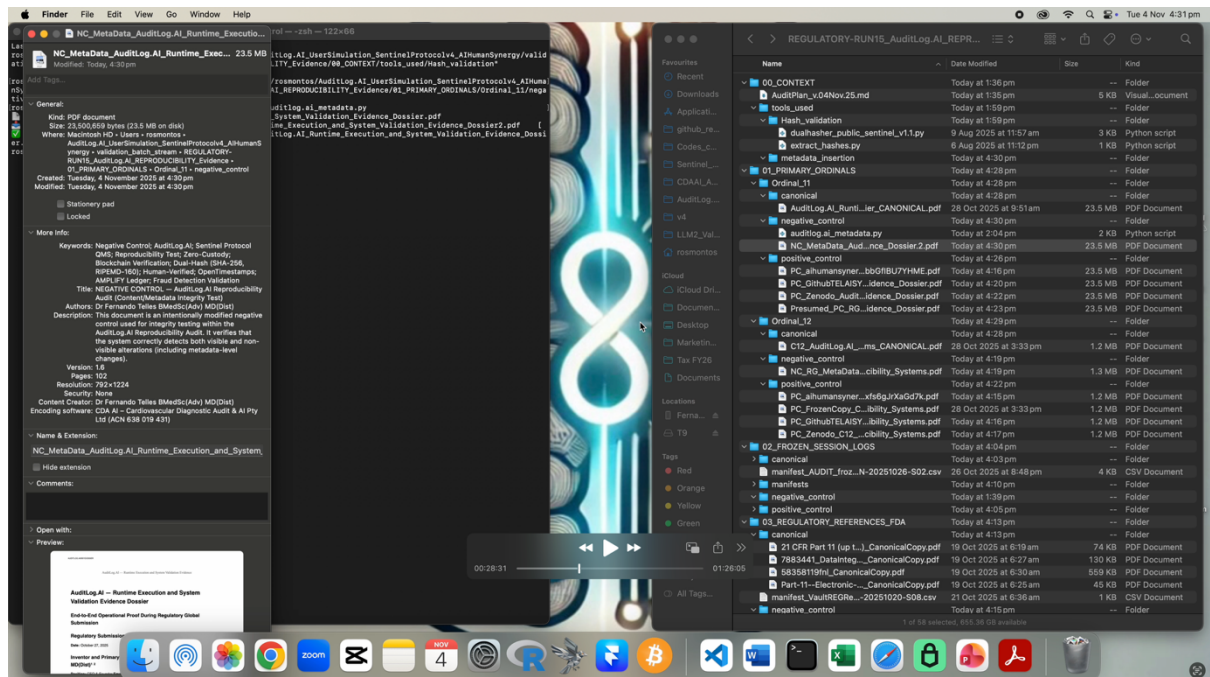
**Evidence File:**

*ts\_00\_28\_31\_NC\_MetaData\_Ordinal11\_DataView\_20251104T231150Z.png*

**Description:** Finder/data view of Ordinal 11 NC file after meta insertion.

**Observation:** Confirms altered file object and timestamps.

**Outcome:** Integrity validation – **PASS** (mismatch expected).



## Ordinal 11 Positive Controls – Independent Sources & Public Repositories

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **match on all POSITIVE CONTROL** files

**Verifier:** *Dr. Fernando Telles*

#### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py

📁 Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/positive_control

✅ Extracted Hash Summary:

Filename SHA256
RIPEMD160

Presumed_PC_RG_NoMetaDataPage_AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier.pdf fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a
b0c8b2223eab705cac6bf7801b64945f7ed47022
PC_GithubTELAISYN_AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier.pdf fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a
b0c8b2223eab705cac6bf7801b64945f7ed47022
PC_Zenodo_AuditLog.AI_Runtime_Execution_and_System_Validation_Evidence_Dossier.pdf fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a
b0c8b2223eab705cac6bf7801b64945f7ed47022
PC_aihumansynergy.org_ZHos1G09x3zUWQ9bbGfIBU7YHME.pdf fc46851b4854ca45798b741c0fb001eaa0945eb73c98795900c87939acb30d8a
b0c8b2223eab705cac6bf7801b64945f7ed47022

📁 Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_11/positive_control/hash_audit_report.csv
```

## Ordinal 12 Canonical

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **match on CANONICAL** file

**Verifier:** *Dr. Fernando Telles*

### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_12/canonical

✓ Extracted Hash Summary:

Filename SHA256
RIPEMD160

C12_AuditLog.AI_Globally_Harmonized_Cryptographically_Anchored_Compliance_Map_for_Digital_Audit_and_Reproducibility_Systems_CANONICAL.pdf
bbedad71af2064fb2456c73483984c538c66c2ed344f2a1cf34eef23cab14b81
fb1822a8113a1b691a7ef64bb7cd64ea2fa02bc8

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_12/canonical/hash_audit_report.csv
```

## Ordinal 12 Negative Controls – Independent (content) & Fraud Detection Testing (metadata)

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **mismatch on independent NEGATIVE CONTROL** file

• Dual-hash SHA256 & RIPEMD160 **mismatch on all Fraud Detection Testing (metadata)**

**Verifier:** *Dr. Fernando Telles*

### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_12/negative_control

✓ Extracted Hash Summary:

Filename SHA256
RIPEMD160

NC_RG_MetaDataPage_C12_AuditLog.AI_Globally_Harmonized_Cryptographically_Anchored_Compliance_Map_for_Digital_Audit_and_Reproducibility_Systems.pdf
3d7731eb1314797214409e8ad8c5e29a69d4902b3f7b7c94e5fcdcf3f5f03ea01
1f9d56a0b86d8b831ce72e95a69d696ad2590ed9
NC_MetaData_C12_AuditLog.AI_Globally_Harmonized_Cryptographically_Anchored_Compliance_Map_for_Digital_Audit_and_Reproducibility_Systems.pdf
0c5a19944a0f25687417aeaf4cd61c33efd947ed6fc81fb746aa6d2e47a0d03f
e7adfe8f46a37b3fa1829fe4918c2ed65f1659b5
```



Exported summary to:  
 /Users/rosmontos/AuditLog.AI\_UserSimulation\_SentinelProtocolv4\_AIHumanSynergy/validation\_batch\_stream/REGULATORY-RUN15\_AuditLog.AI\_REPRODUCIBILITY\_Evidence/01\_PRIMARY\_ORDINALS/Ordinal\_12/negative\_control/hash\_audit\_report.csv

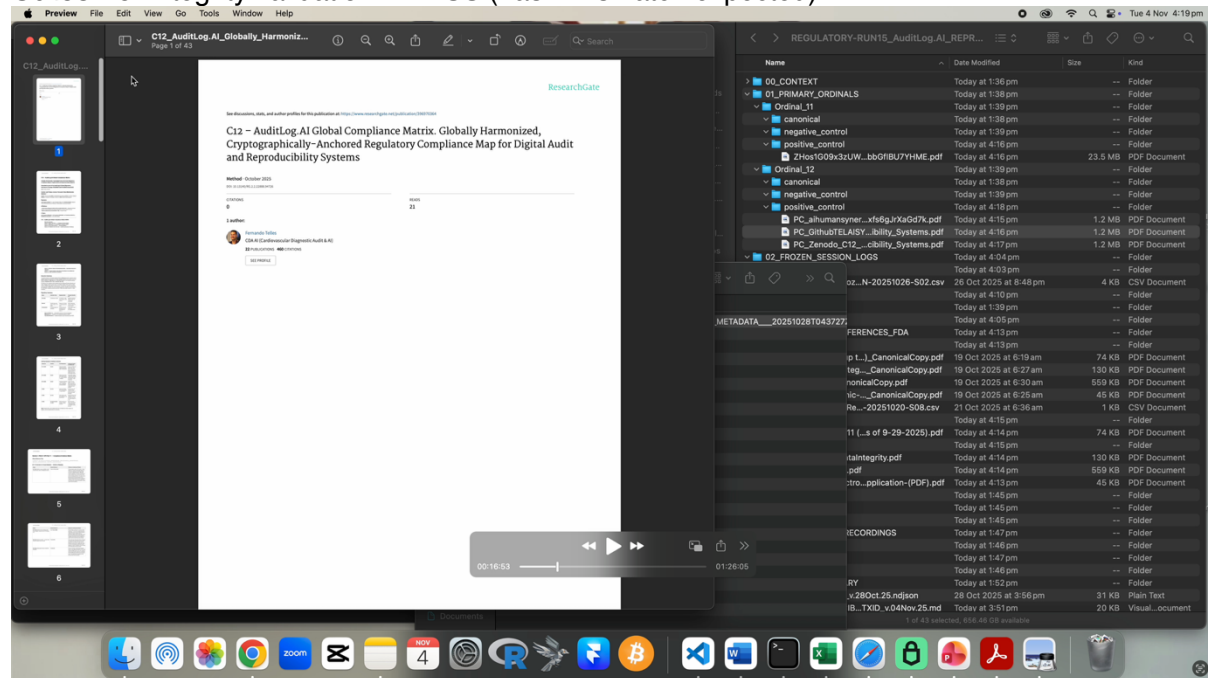
### Evidence File:

ts\_00\_16\_53\_ORDINAL12\_NC\_RG\_MetaDataPage\_\_20251104T231150Z.png

**Description:** ResearchGate copy incl. metadata page (negative control).

**Observation:** Structural page addition visible.

**Outcome:** Integrity validation – **PASS** (hash mismatch expected).



## Ordinal 12 Positive Controls – Frozen Copies, Public Repositories and Independent Sources

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **match on all POSITIVE CONTROL** files

**Verifier:** Dr. Fernando Telles

### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing '.hash' and '.2ha' files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_12/positive_control
✓ Extracted Hash Summary:

Filename SHA256
RIPEMD160
```

```

📄 Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-
RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/01_PRIMARY_ORDINALS/Ordinal_12/positive_control/hashed_audit_report.csv

```

**Outcome:** Positive-control parity – **PASS** (matches canonical).



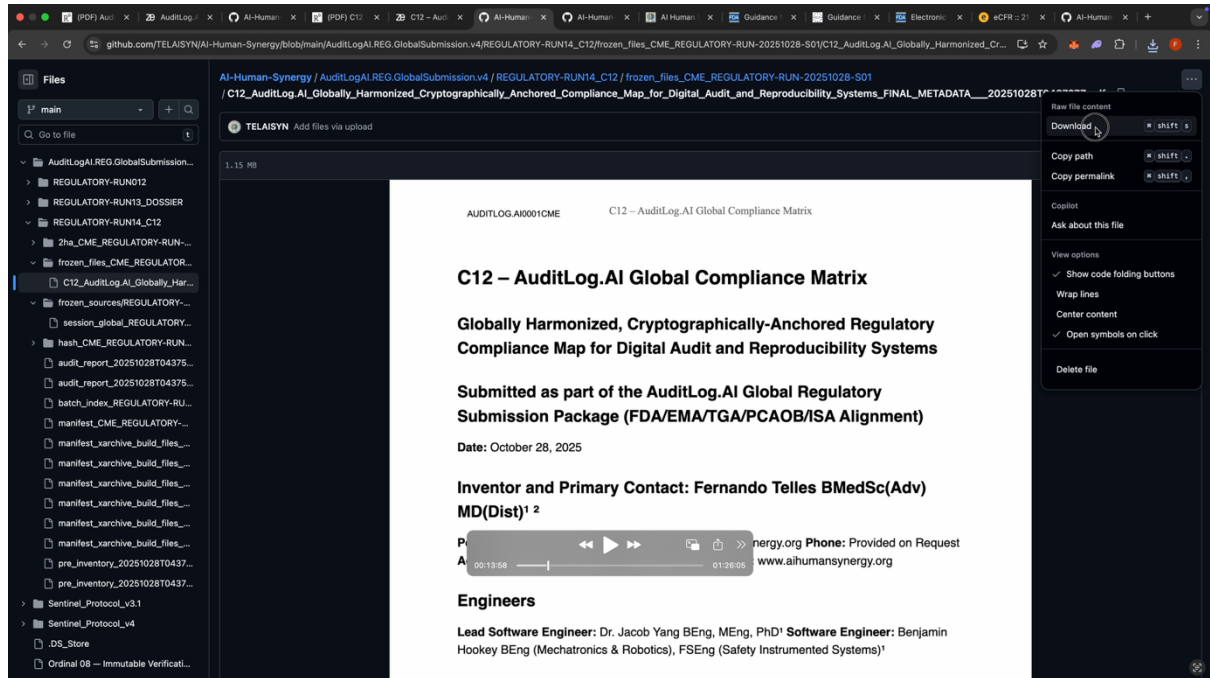
**Evidence File:**

*ts\_00\_13\_58\_ORDINAL12\_PC\_PublicRepository\_github.com\_20251104T231150Z.png*

**Description:** Public repo positive control (GitHub) for Ordinal 12.

**Observation:** Source path and artifact name shown.

**Outcome:** Positive-control parity – **PASS**.

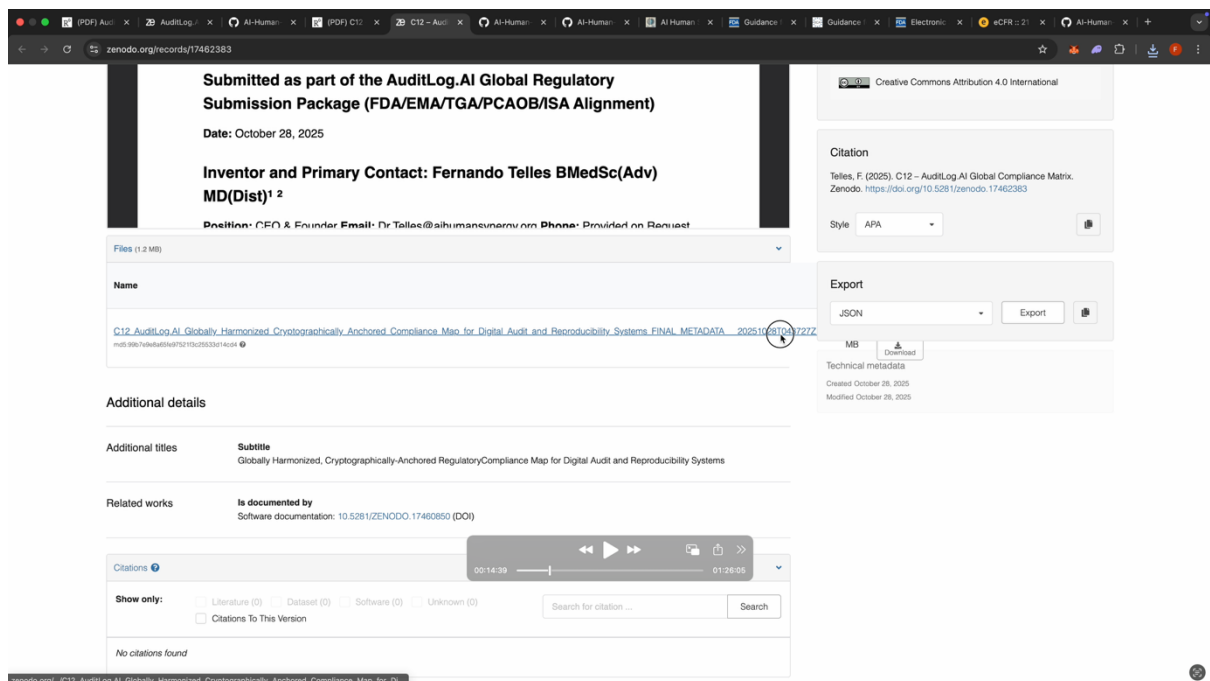
**Evidence File:**

*ts\_00\_14\_39\_ORDINAL12\_PC\_Independent\_Zenodo\_DOI\_20251104T231150Z.png*

**Description:** Independent DOI repository (Zenodo) for Ordinal 12.

**Observation:** DOI page and file are visible for public verification.

**Outcome:** Positive-control parity – **PASS**.



## 02 Session Logs

### Session Logs Canonicals

#### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 match on all **CANONICAL** files

Verifier: *Dr. Fernando Telles*

#### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/canonical

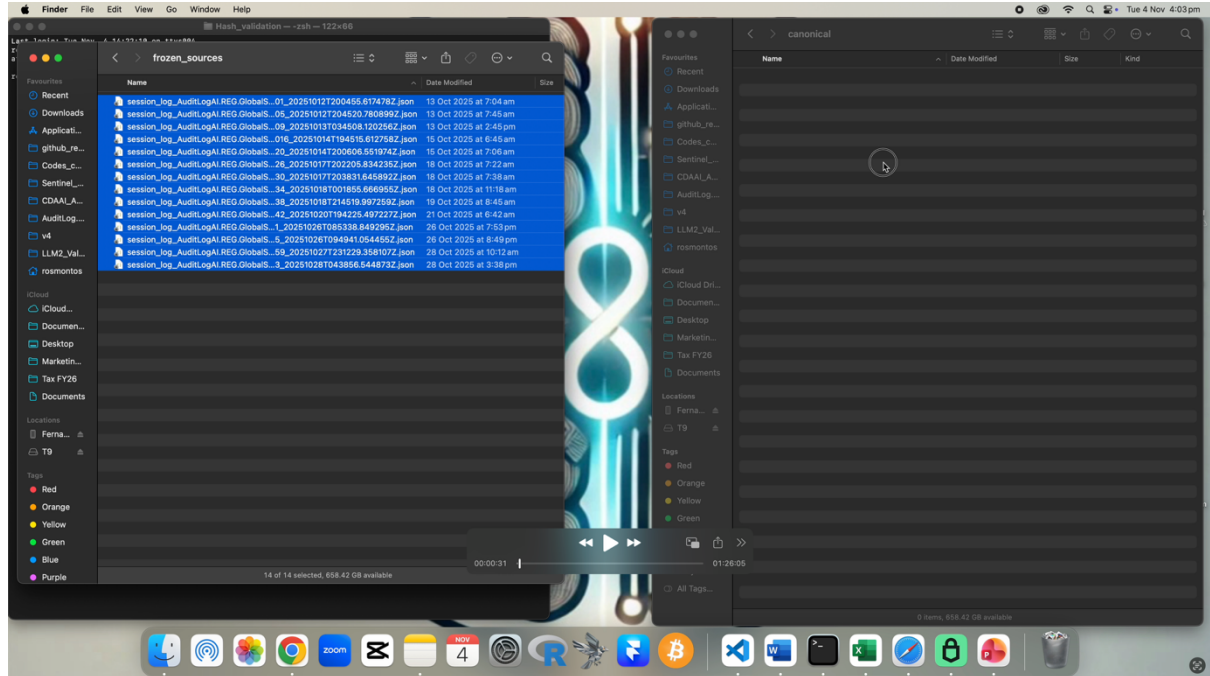
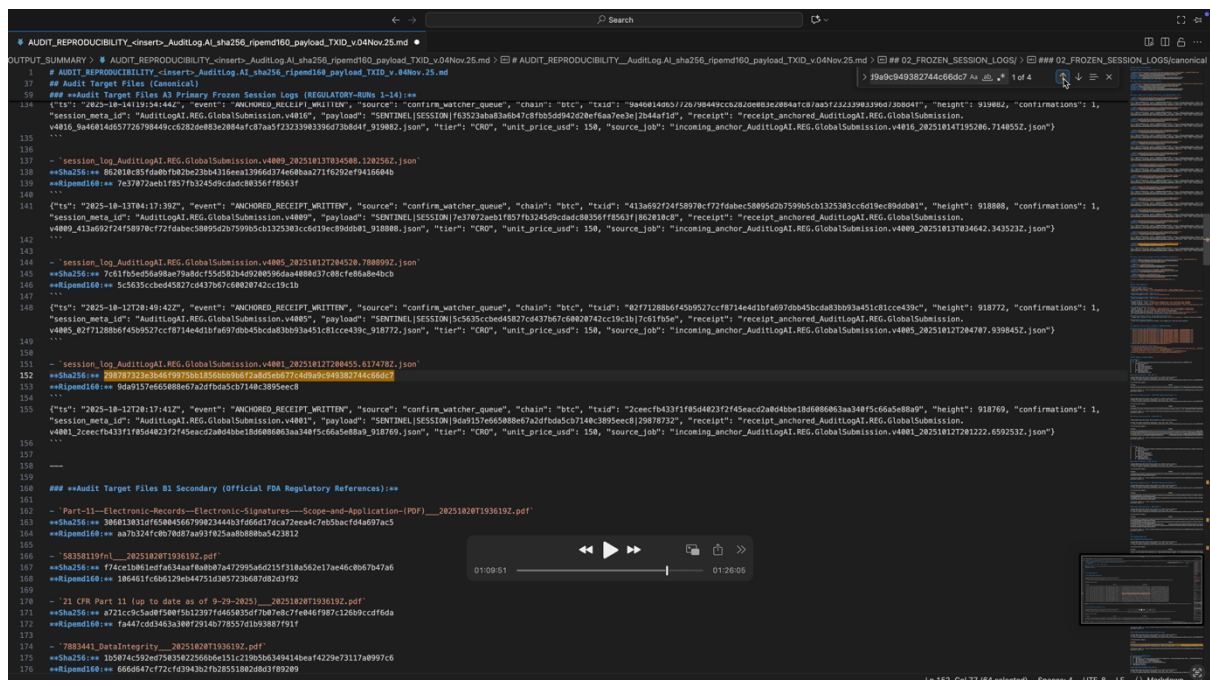
[✓] Extracted Hash Summary:

Filename SHA256
RIPEMD160

session_log_AuditLogAI.REG.GlobalSubmission.v4059_20251027T231229.358107Z.json
db4451a879e62a1e34a14a6052a442172be6c8798aff163a9564a31beb768d21
d51e9af05a7b8f32db2f85ab0a76ea7e71cadede
session_log_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204520.780899Z.json
7c61fb5ed56a98ae79a8dcf55d582b4d9200596daa4080d37c08cfe86a8e4bcb
5c5635ccbed45827cd437b67c60020742cc19c1b
session_log_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194225.497227Z.json
5c6899adad23ba9e5cbe2c1e57b2a11df3ac4d29f0fa2b27a9dc52b3993d859a
62906b9bc17efa60726d54455bbb00252384e01e
session_log_AuditLogAI.REG.GlobalSubmission.v4055_20251026T094941.054455Z.json
dddf0c692264e9790b1ec3498958eeb9e911a659a20edb666717df7b05d0f51d
1460fb9944c4291a75efb35be571df0161cb21a6
session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z.json
940277234a4293031780c7e627355221924b373f285212fd5baa1cff14568398
ab212c3fb3a90d46bd09601574fdb69f92956075
session_log_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085338.849295Z.json
05a3e17dfc281b22d82edd943f2c00d8c928e585c17f8490b2894f52469ba629
e27980be020be1a3aa2533e0b15496d829fb7565
session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z.json
298787323e3b46f9975bb1856bbb9b6f2a8d5eb677c4d9a9c949382744c66dc7
9da9157e665088e67a2dfbda5cb7140c3895eec8
session_log_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202205.834235Z.json
bc48e033cb27fc960620a2828821561b6817df140a5669700426384a23bba85e
1f8661d7186f7721de804ebff1a18ab60c8113f0
session_log_AuditLogAI.REG.GlobalSubmission.v4038_20251018T214519.997259Z.json
5af54564b05e7ae9c8e6b4c918ca19586ca3c7e58af6b72806fa08603b27e844
fb5e9fa9e3873fe223eaf1c60c4fc7dd0968c5a
session_log_AuditLogAI.REG.GlobalSubmission.v4063_20251028T043856.544873Z.json
c5a677fe7df22429186b03467c1fe26250d0f2f84de37aa2e35bee15d8eb9e66
fb8750a3fe40cae25e96b31b128778d59ee7bcda
session_log_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200606.551974Z.json
5c009fb3e680ca41e0e17aefe3bc931ec00b195e8faa0eb3f546d059930b0724
041cf98418a6ae39dbcc5d3e49e60a06a5112993
session_log_AuditLogAI.REG.GlobalSubmission.v4034_20251018T001855.666955Z.json
ef6556d6a4b9d035a5f100560ab3ce17f10024551e3c0955f42b1f871496eae4
6fc7fef1cb6734cd5a3bb1147c25b756e9a41669
session_log_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034508.120256Z.json
862010c85fda0bfb02be23bb4316eea13966d374e60baa271f6292ef9416604b
7e37072aeb1f857fb3245d9cdadc80356ff8563f
session_log_AuditLogAI.REG.GlobalSubmission.v4016_20251014T194515.612758Z.json
2b44af1d4888f598c89dec992b6ce31d6fc0daab7a2480a3efb07d44bf3eb055
f63523aba83a6b47c8fbb5dd942d20ef6aa7ee3e

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/canonical/hash_audit_report.csv
```



**Evidence File:***ts\_00\_00\_31\_Frozen\_Session\_Logs\_Canonical\_\_\_20251104T231150Z.png***Description:** Canonical folder of frozen session logs.**Observation:** Finder view shows unmodified canonical set.**Outcome:** Baseline confirmation – **PASS**.**Evidence File:***ts\_01\_09\_51\_AUDIT\_PASS\_VScode\_VisualDiff\_Session\_Log\_v4001\_SHA256\_\_\_20251104T231150Z.png***Description:** VS Code diff highlighting SHA-256 parity for session log v4001.**Observation:** Highlighted digest strings match canonical; search bar shows four identical SHA-256 matches.**Outcome:** Integrity validation – **PASS**.

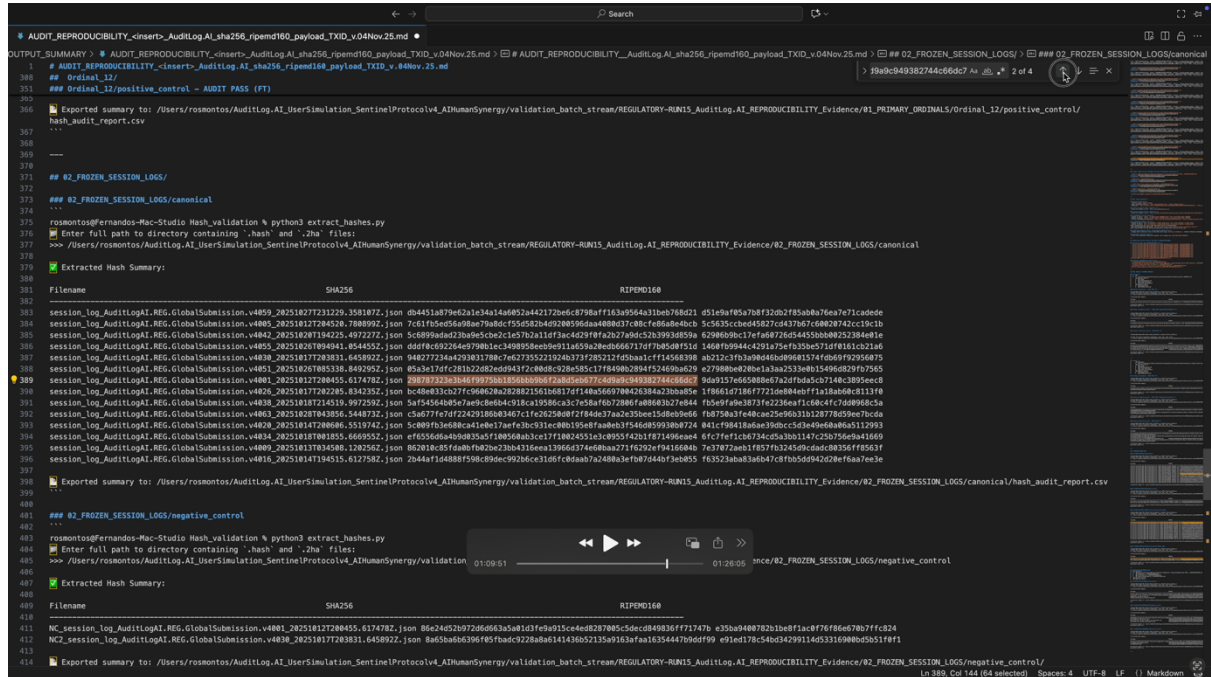
**Evidence File:**

*ts\_01\_09\_51\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_SHA256\_Canonical\_\_\_20251104T231150Z.png*

**Description:** Canonical view (comparison context) for session log v4001 SHA-256.

**Observation:** Search bar engaged, SHA-256 match 2 of 4 displayed.

**Outcome:** SHA-256 reproducibility validated – **PASS**.

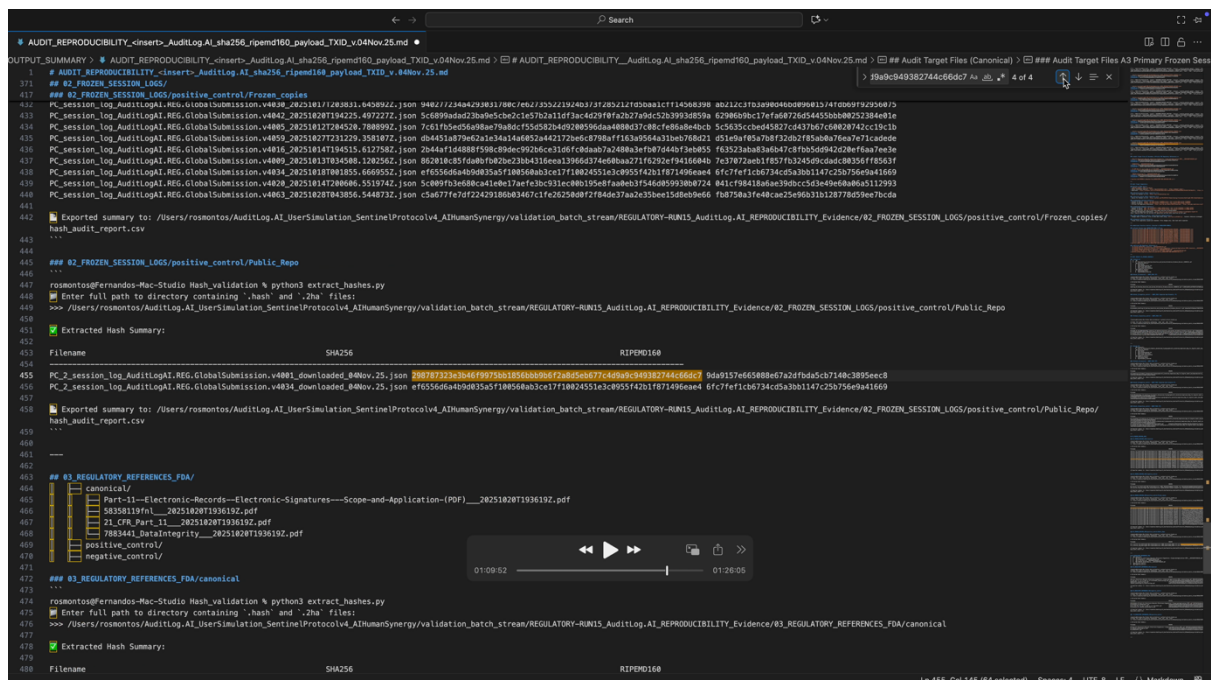
**Evidence File:**

*ts\_01\_09\_52\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_SHA256\_PC\_PublicRepository\_\_\_20251104T231150Z.png*

**Description:** Public-repo positive control parity for session log v4001 SHA-256.

**Observation:** Digest equality between canonical and public copy, SHA-256 match 4 of 4

**Outcome:** Positive-control parity – **PASS**.





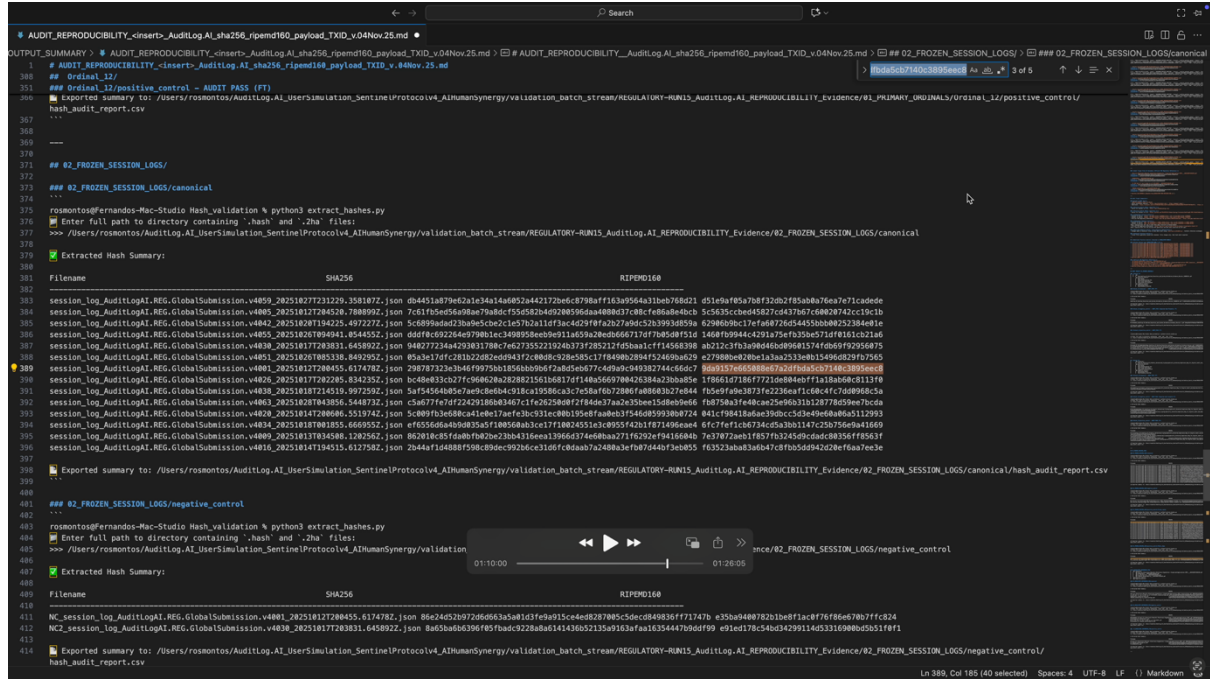
**Evidence File:**

*ts\_01\_10\_00\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_RIPEMD160\_Canonical\_\_\_20251104T231150Z.png*

**Description:** Canonical RIPEMD-160 digest for session log v4001.

**Observation:** Baseline digest visible for comparison with search bar revealing five identical RIPEMD-160 matches (additional match corresponding to AMPLIFY LEDGER payload).

**Outcome:** Reference frame – **PASS**.

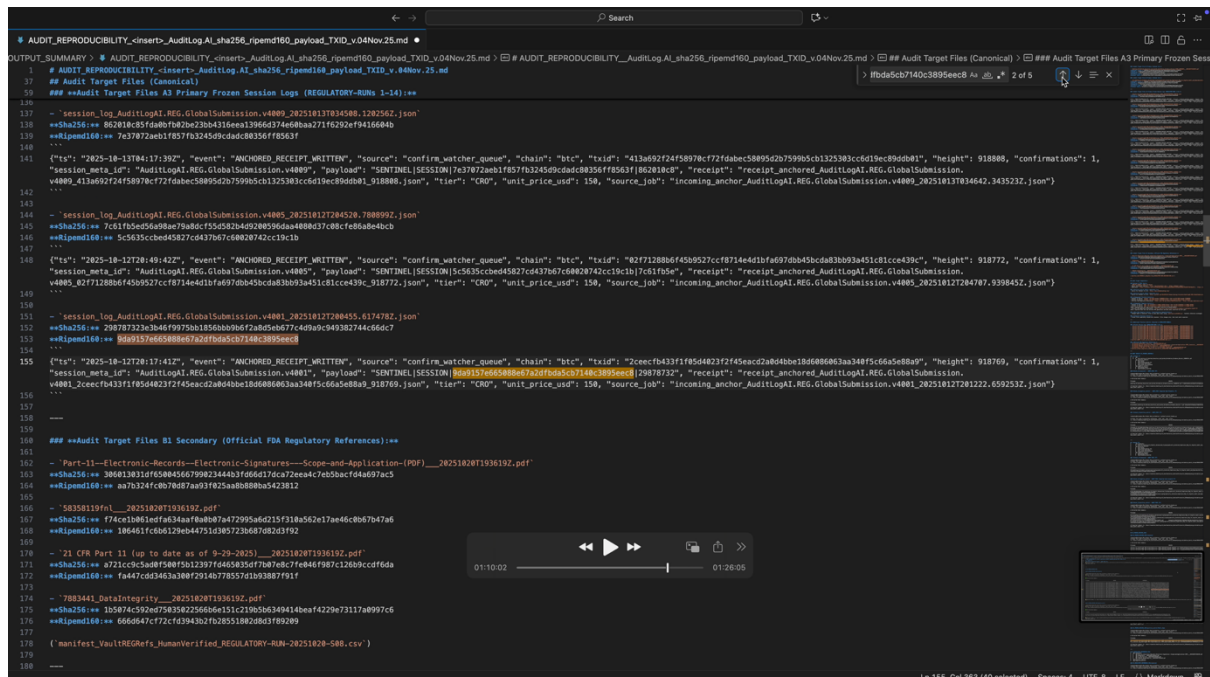
**Evidence File:**

*ts\_01\_10\_02\_AUDIT\_PASS\_VScode\_VisualDiff\_Session\_Log\_v4001\_RIPEMD160\_\_\_20251104T231150Z.png*

**Description:** VS Code diff confirming RIPEMD-160 parity for session log v4001.

**Observation:** Digests match between sources, RIPEMD-160 matches 1 & 2 of 5 highlighted.

**Outcome:** Payload and AMPLIFY LEDGER parity – **PASS**.



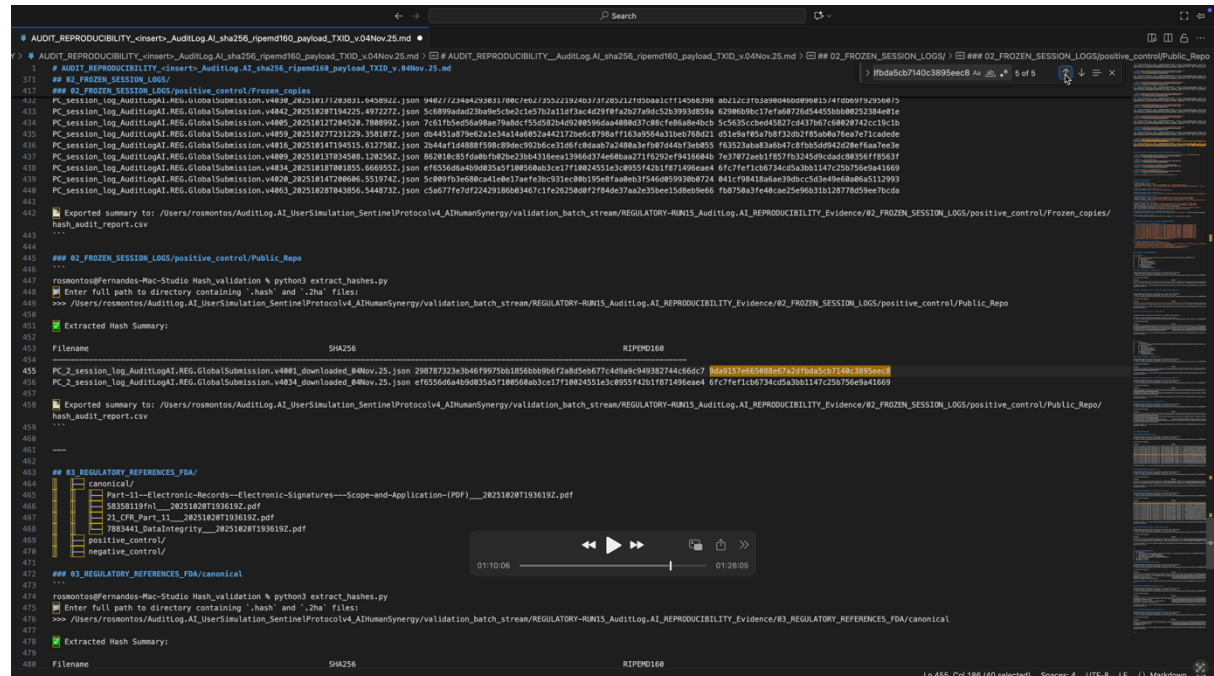
**Evidence File:**

*ts\_01\_10\_06\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_RIPEMD160\_PC\_PublicReposit*  
*ory\_20251104T231150Z.png*

**Description:** RIPEMD-160 parity with public-repo copy, match 5 of 5.

**Observation:** Equality highlights across files.

**Outcome:** Positive-control parity – **PASS**.

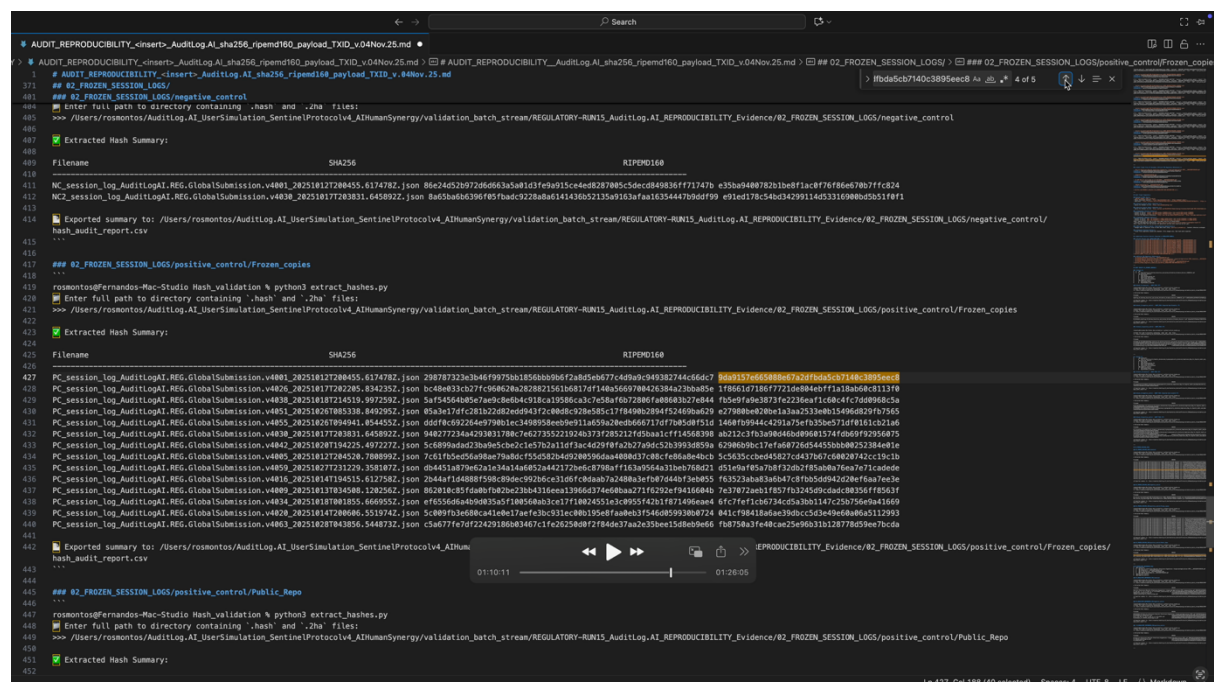
**Evidence File:**

*ts\_01\_10\_11\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_RIPEMD160\_PC\_FrozenCopy\_*  
*20251104T231150Z.png*

**Description:** RIPEMD-160 parity with frozen positive-control copy.

**Observation:** Identical digests across sources, match 4 of 5 highlighted.

**Outcome:** Positive-control parity – **PASS**.



## Session Logs Negative Controls – Minimal Content Alteration

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 mismatch on all **NEGATIVE CONTROL** files

Verifier: *Dr. Fernando Telles*

### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing '.hash' and '.2ha' files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/negative_control
✓ Extracted Hash Summary:

Filename SHA256
RIPEMD160

NC_session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z.json
86e24d52b972d6d663a5a01d3fe9a915ce4ed8287005c5dec849836ff71747b
e35ba9400782b1be8f1ac0f76f86e670b7ffc824
NC2_session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z.json
8a65ba6b6396f05fbadc9228a8a6141436b52135a9163afaa16354447b9ddf995
e91ed178c54bd34299114d53316900bd5b51f0f1

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/negative_control/hash_audit_report.csv
```

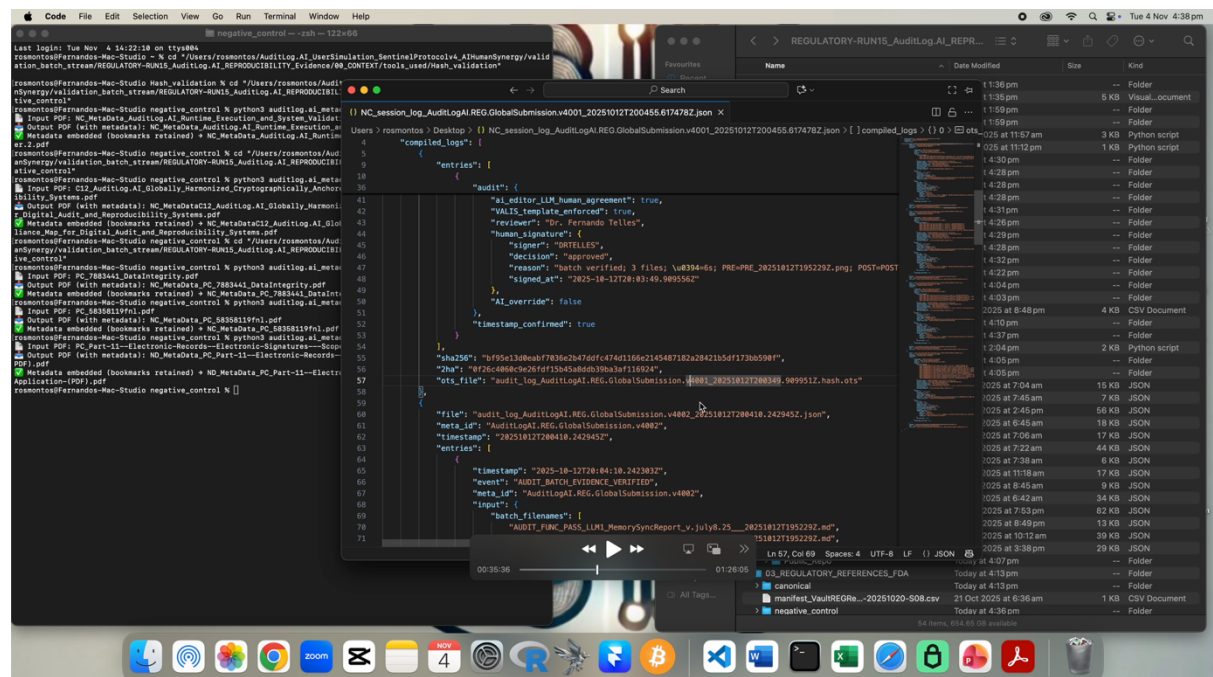
### Evidence File:

*ts\_00\_35\_36\_NC\_Session\_log\_v4001\_PRE\_modification\_\_\_\_20251104T231150Z.png*

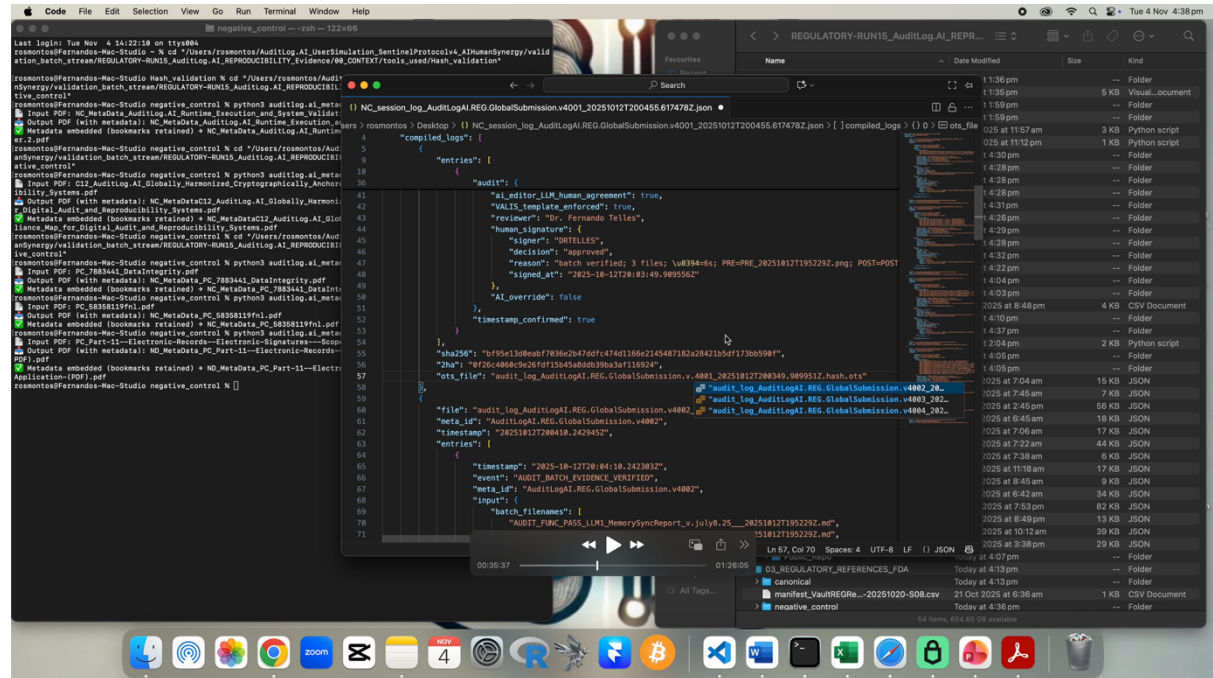
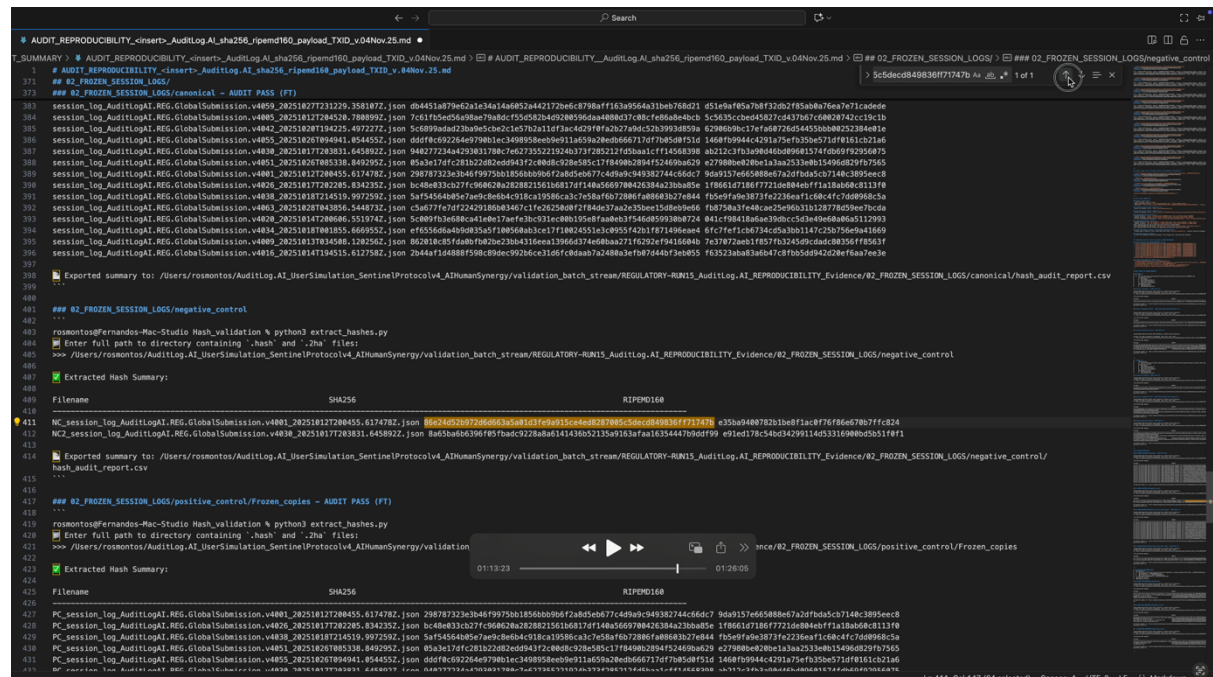
**Description:** PRE-modification snapshot for negative-control session log v4001 example.

**Observation:** Baseline content view prior to change.

**Outcome:** Control context – **PASS**.





**Evidence File:***ts\_00\_35\_37\_NC\_session\_log\_v4001\_MinorContentModification\_20251104T231150Z.png***Description:** Minor content change applied (negative control).**Observation:** Small edit introduced to JSON payload (v4001 changed to v.4001).**Outcome:** Expected hash change – **PASS** (mismatch).**Evidence File:***ts\_01\_13\_23\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_SHA256\_NC\_MinorModification\_20251104T231150Z.png***Description:** VS Code diff (SHA-256) after minor change.**Observation:** SHA-256 differs from canonical/PC, search bar engaged showing 1 of 1.**Outcome:** Negative-control detection – **PASS**.

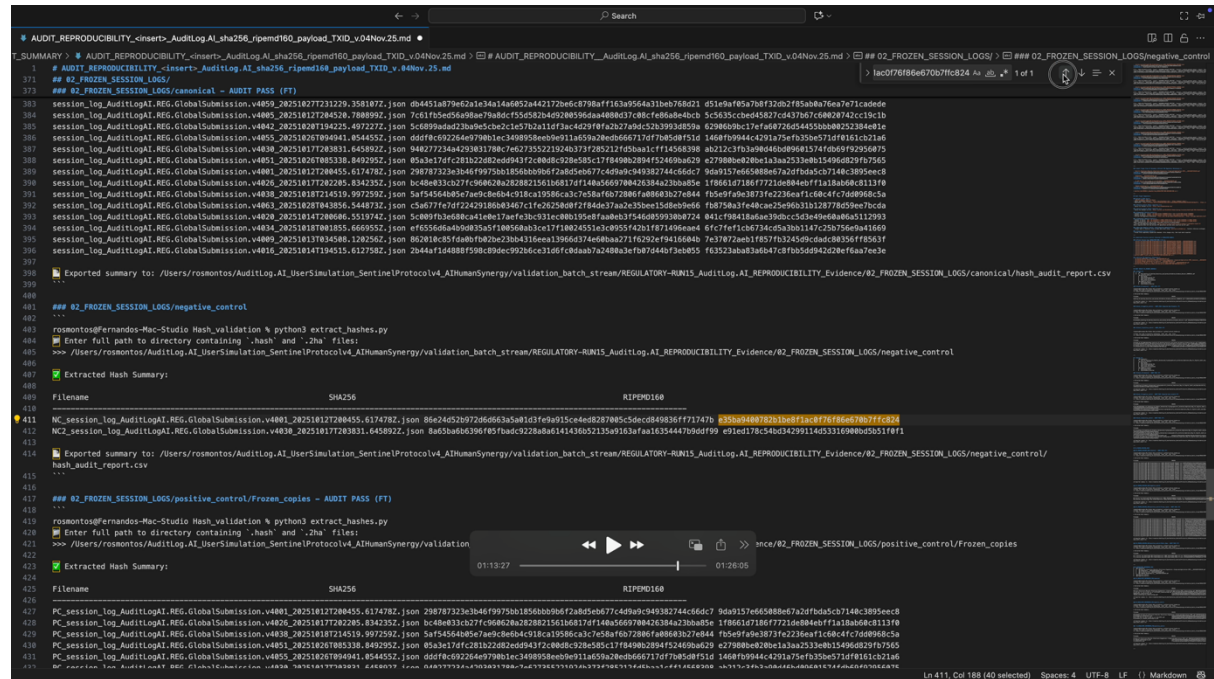
**Evidence File:**

*ts\_01\_13\_27\_AUDIT\_VScode\_VisualDiff\_Session\_Log\_v4001\_RIPEMD160\_NC\_MinorModification\_20251104T231150Z.png*

**Description:** VS Code diff (RIPEMD-160) after minor change.

**Observation:** RIPEMD-160 mismatch confirmed, search bar engaged 1 of 1 displayed.

**Outcome:** Negative-control detection – **PASS**.

**Session Logs Positive Controls – Frozen Copies****Audit Status: PASS**

• Dual-hash SHA256 & RIPEMD160 match on all frozen copies **POSITIVE CONTROL** files

**Verifier:** Dr. Fernando Telles

**CLI output excerpt:**

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing \.hash\ and \.2ha\ files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation.SentinelProtocolv4_AIHHumanSynergy/validation_batch_stream/REGULATORY-
RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/positive_control/Frozen_copies
[✓] Extracted Hash Summary:

Filename SHA256
RIPEMD160

PC_session_log_AuditLogAI.REG.GlobalSubmission.v4001_20251012T200455.617478Z.json
298787323e3b46f9975bb1856bbb9b6f7c2a8d5eb677c4d9a9c949382744c66dc7
9da9157e665088e67a2dfbda5cb7140c3895eec8
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4026_20251017T202205.834235Z.json
bc48e033cb27f9c60620a2828821561b6817df140a5669700426384a23bba85e
1f8661d7186f7721de804ebff1a18ab60c8113f0
```

```
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4038_20251018T214519.997259Z.json
5af54564b05e7ae9c8e6b4c918ca19586ca3c7e58af6b72806fa08603b27e844
fb5e9fa9e3873fe2236eaf1c60c4fc7dd0968c5a
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4051_20251026T085338.849295Z.json
05a3e17dfc281b22d82edd943f2c00d8c928e585c17f8490b2894f52469ba629
e27980be020be1a3aa2533e0b15496d829fb7565
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4055_20251026T094941.054455Z.json
dddf0c692264e9790b1ec3498958eeb9e911a659a20edb666717df7b05d0f51d
1460fb9944c4291a75efb35be571df0161cb21a6
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4030_20251017T203831.645892Z.json
940277234a4293031780c7e627355221924b373f285212fd5baa1cfff14568398
ab212c3fb3a90d46bd09601574fdb69f92956075
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4042_20251020T194225.497227Z.json
5c6899adad23ba9e5cbe2c1e57b2a11df3ac4d29f0fa2b27a9dc52b3993d859a
62906b9bc17efa60726d54455bbb00252384e01e
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4005_20251012T204520.780899Z.json
7c61fb5ed56a98ae79a8dcf55d582b4d9200596daa4080d37c08cfe86a8e4bcb
5c5635ccbed45827cd437b67c60020742cc19c1b
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4059_20251027T231229.358107Z.json
db4451a879e62a1e34a14a6052a442172be6c8798aff163a9564a31beb768d21
d51e9af05a7b8f32db2f85ab0a76ea7e71cadede
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4016_20251014T194515.612758Z.json
2b44af1d4888f598c89dec992b6ce31d6fc0daab7a2480a3efb07d44bf3eb055
f63523aba83a6b47c8fbb5dd942d20ef6aa7ee3e
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4009_20251013T034508.120256Z.json
862010c85fda0bfb02be23bb4316eea13966d374e60baa271f6292ef9416604b
7e37072aeb1f857fb3245d9cdadc80356ff8563f
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4034_20251018T001855.666955Z.json
ef6556d6a4b9d035a5f100560ab3ce17f10024551e3c0955f42b1f871496eae4
6fc7fef1cb6734cd5a3bb1147c25b756e9a41669
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4020_20251014T200606.551974Z.json
5c009fb3e680ca41e0e17aefe3bc931ec00b195e8faa0eb3f546d059930b0724
041cf98418a6ae39dbcc5d3e49e60a06a5112993
PC_session_log_AuditLogAI.REG.GlobalSubmission.v4063_20251028T043856.544873Z.json
c5a677fe7df22429186b03467c1fe26250d0f2f84de37aa2e35bee15d8eb9e66
fb8750a3fe40cae25e96b31b128778d59ee7bcda
```

📄 Exported summary to:  
 /Users/rosmontos/AuditLog.AI\_UserSimulation\_SentinelProtocolv4\_AIHumanSynergy/validation\_batch\_stream/REGULATORY-RUN15\_AuditLog.AI\_REPRODUCIBILITY\_Evidence/02\_FROZEN\_SESSION\_LOGS/positive\_control/Frozen\_copies/hash\_audit\_report.csv

## Session Logs Positive Controls – Public Repository

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 match on public repository **POSITIVE CONTROL** files

**Verifier:** Dr. Fernando Telles

### CLI output excerpt:

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
📄 Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/02_FROZEN_SESSION_LOGS/positive_control/Public_Repository
```

✅ Extracted Hash Summary:

Filename	SHA256
RIPEMD160	



```
PC_2_session_log_AuditLogAI.REG.GlobalSubmission.v4001_downloaded_04Nov.25.json
298787323e3b46f9975bb1856bbb9b6f2a8d5eb677c4d9a9c949382744c66dc7
9da9157e665088e67a2dfbda5cb7140c3895eec8
PC_2_session_log_AuditLogAI.REG.GlobalSubmission.v4034_downloaded_04Nov.25.json
ef6556d6a4b9d035a5f100560ab3ce17f10024551e3c0955f42b1f871496eae4
6fc7fef1cb6734cd5a3bb1147c25b756e9a41669
```

📄 Exported summary to:  
/Users/rosmontos/AuditLog.AI\_UserSimulation\_SentinelProtocolv4\_AIHumanSynergy/validation\_batch\_stream/REGULATORY-RUN15\_AuditLog.AI\_REPRODUCIBILITY\_Evidence/02\_FROZEN\_SESSION\_LOGS/positive\_control/Public\_Report/hash\_audit\_report.csv

---

## 03 Regulatory References FDA

### Regulatory References Canonicals

#### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **match on all CANONICAL** files

**Verifier:** *Dr. Fernando Telles*

#### CLI output excerpt:

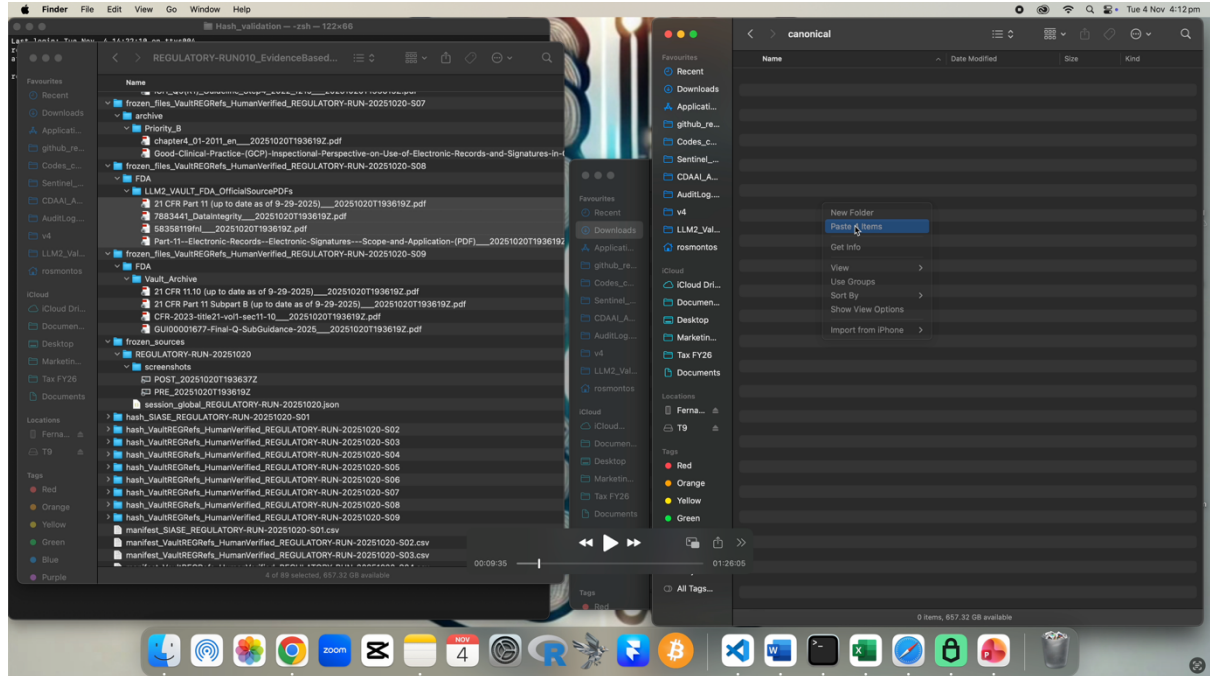
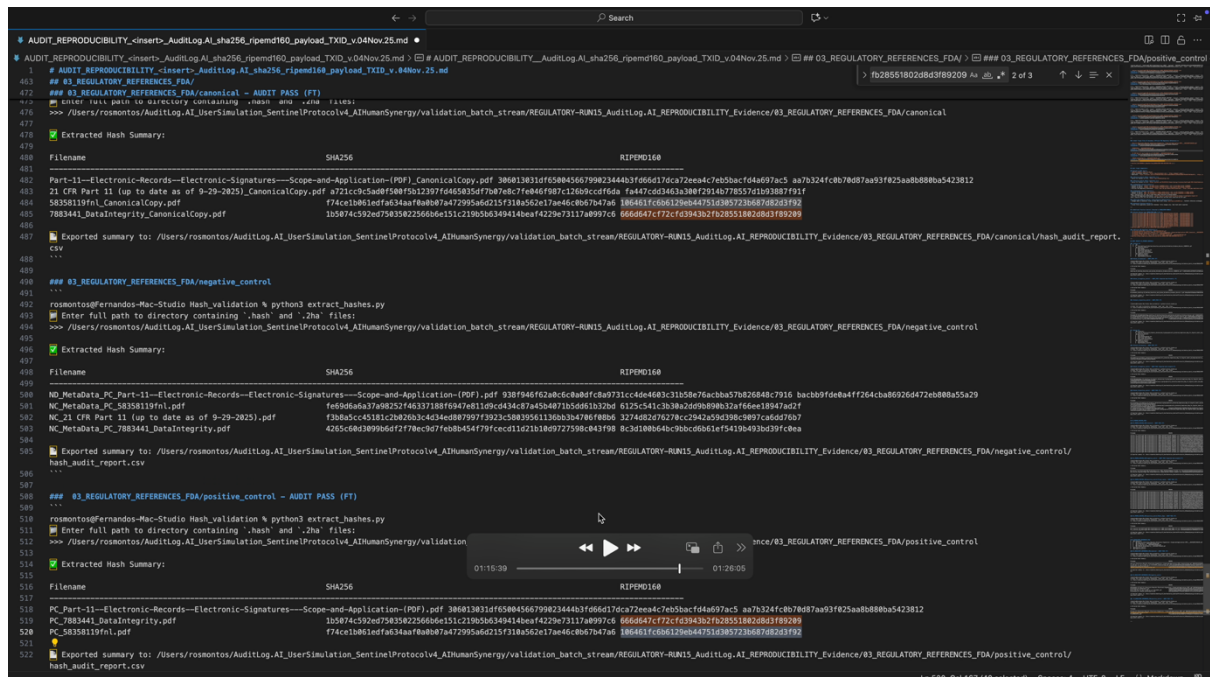
```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
📄 Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/canonica

✅ Extracted Hash Summary:

Filename SHA256
RIPEMD160

Part-11--Electronic-Records--Electronic-Signatures---Scope-and-Application-
(PDF)_CanonicalCopy.pdf 306013031df65004566799023444b3fd66d17dca72eea4c7eb5bacfd4a697ac5
aa7b324fc0b70d87aa93f025aa8b880ba5423812
21 CFR Part 11 (up to date as of 9-29-2025)_CanonicalCopy.pdf
a721cc9c5ad0f500f5b12397fd465035df7b07e8c7fe046f987c126b9ccdf6da
fa447cdd3463a300f2914b778557d1b93887f91f
58358119fnl_CanonicalCopy.pdf
f74ce1b061edfa634aaf0a0b07a472995a6d215f310a562e17ae46c0b67b47a6
106461fc6b6129eb44751d305723b687d82d3f92
7883441_DataIntegrity_CanonicalCopy.pdf
1b5074c592ed75035022566b6e151c219b5b6349414beaf4229e73117a0997c6
666d647cf72cfd3943b2fb28551802d8d3f89209

📄 Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/canonica/hash_audit_report.csv
```

**Evidence File:***ts\_00\_09\_35\_FDA\_Canonical\_\_\_\_20251104T231150Z.png***Description:** Canonical frozen FDA reference set displayed.**Observation:** Manual copy & paste methodology, followed by file name changes only.**Outcome:** Canonical frozen baseline demonstrated – **PASS**.**Evidence File:***ts\_01\_15\_39\_AUDIT\_VScode\_VisualDiff\_FDA\_RIPEMD160\_Canonical\_PC\_Match\_\_\_\_20251104T231150Z.png***Description:** VS Code parity check example for FDA file (RIPEMD-160).**Observation:** Canonical vs positive-control digests match, 2 of 3 matches highlighted.**Outcome:** Positive-control parity – **PASS**.

## Regulatory References Metadata Fraud Detection Testing Negative Controls (Independent & AuditLog.AI Generated)

### Audit Status: **PASS**

• Dual-hash SHA256 & RIPEMD160 **mismatch on Independent Metadata Level Detection Testing** file

• Dual-hash SHA256 & RIPEMD160 **mismatch on all Metadata Level Fraud Detection Testing** files (AuditLog.AI generated)

**Verifier:** *Dr. Fernando Telles*

### CLI output excerpt:

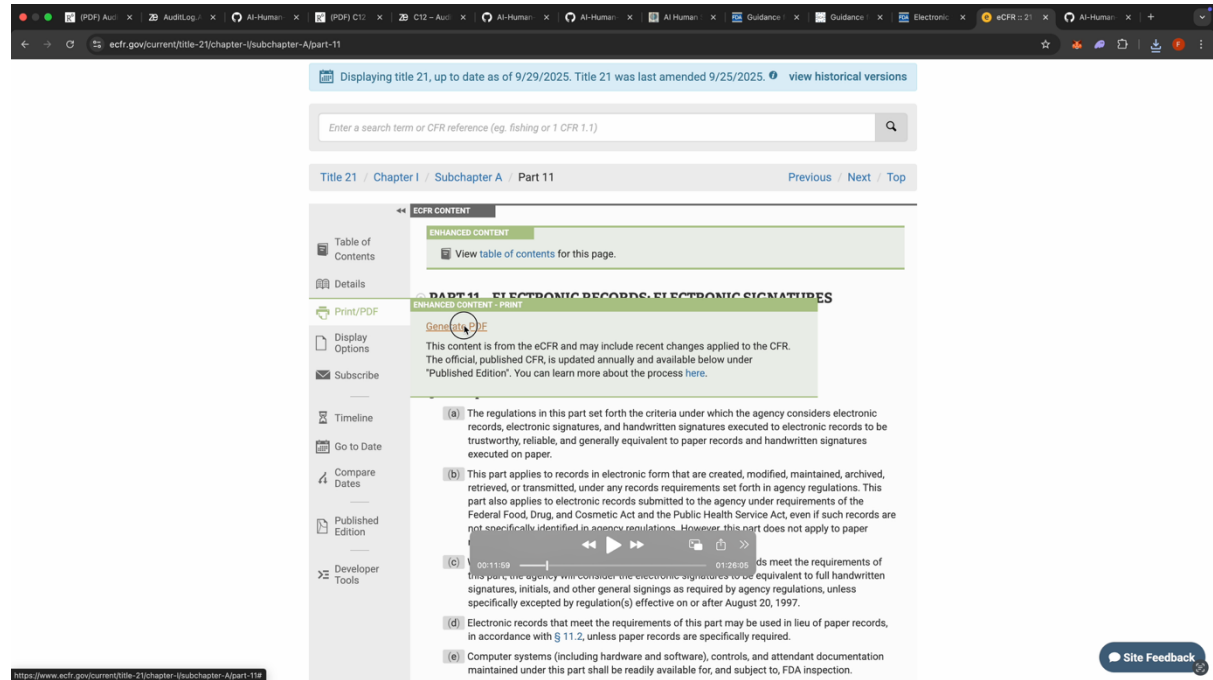
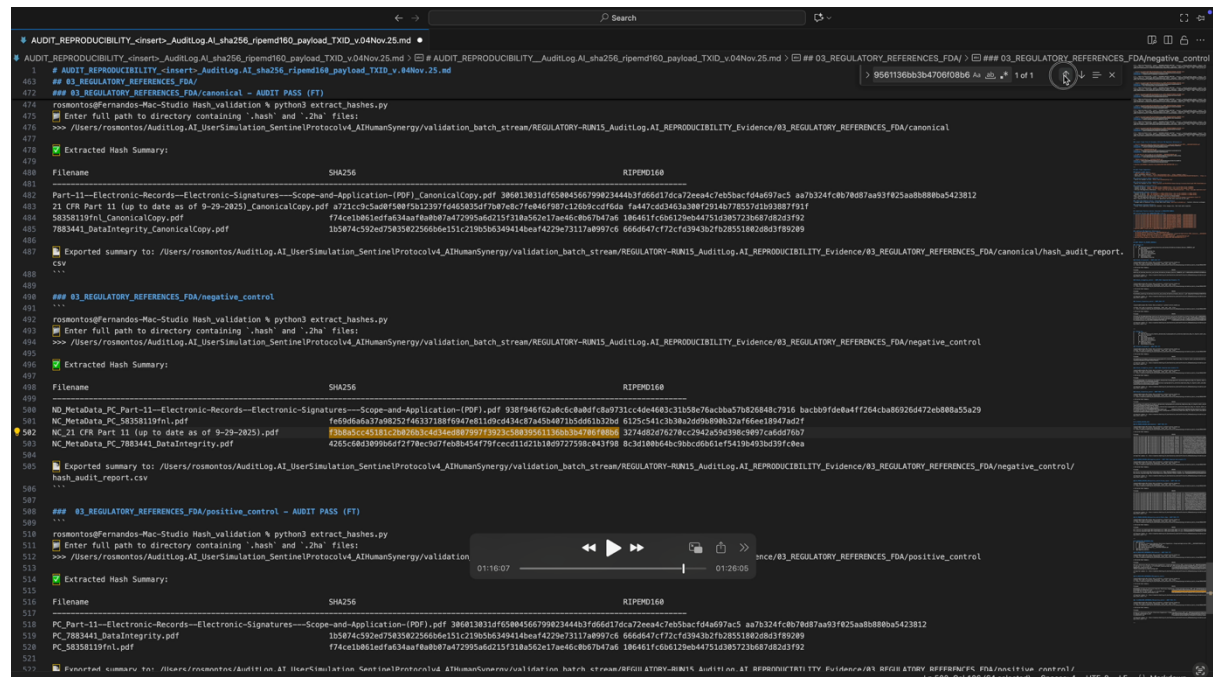
```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
📁 Enter full path to directory containing `.hash` and `.2ha` files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/negative_control

✅ Extracted Hash Summary:

Filename SHA256
RIPEMD160

ND_Metadata_PC_Part-11--Electronic-Records--Electronic-Signatures---Scope-and-Application-
(PDF).pdf 938f946f62a0c6c0a0dfc8a9731cc4de4603c31b58e76acbba57b826848c7916
bacbb9fde0a4ff264cba86926d472eb808a55a29
NC_Metadata_PC_58358119fnl.pdf
fe69d6a6a37a98252f46337188f6947e811d9cd434c87a45b4071b5dd61b32bd
6125c541c3b30a2dd9b890b32af66ee18947ad2f
NC_21 CFR Part 11 (up to date as of 9-29-2025).pdf
f3b8a5cc45181c2b026b3c4d34ed807997f3923c58039561136bb3b4706f08b6
3274d82d76270cc2942a59d398c9097ca6dd76b7
NC_Metadata_PC_7883441_DataIntegrity.pdf
4265c60d3099b6df2f70ec9d7feb8b454f79fceed11d21b10d9727598c043f98
8c3d100b64bc9bbcd6b61ef5419b493bd39fc0ea

📄 Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/negative_control/hash_audit_report.csv
```

**Evidence File:***ts\_00\_11\_59\_FDA\_NC\_MetaData\_ecfr.gov\_20251104T231150Z.png***Description:** ecfr.gov regenerated PDF (negative control).**Observation:** Browser view shows regenerated artifact (identical contents, metadata delta).**Outcome:** Expected detection of metadata only changes — **PASS** (mismatch).**Evidence File:***ts\_01\_16\_07\_AUDIT\_VSCode\_VisualDiff\_FDA\_SHA256\_Independent\_NC\_\_20251104T231150Z.png***Description:** Manual VS Code visual diff of FDA official negative control (independent source).**Observation:** Unique SHA-256 mismatch confirms non-canonical metadata change.**Outcome:** Integrity validation — **PASS** (expected mismatch detected).

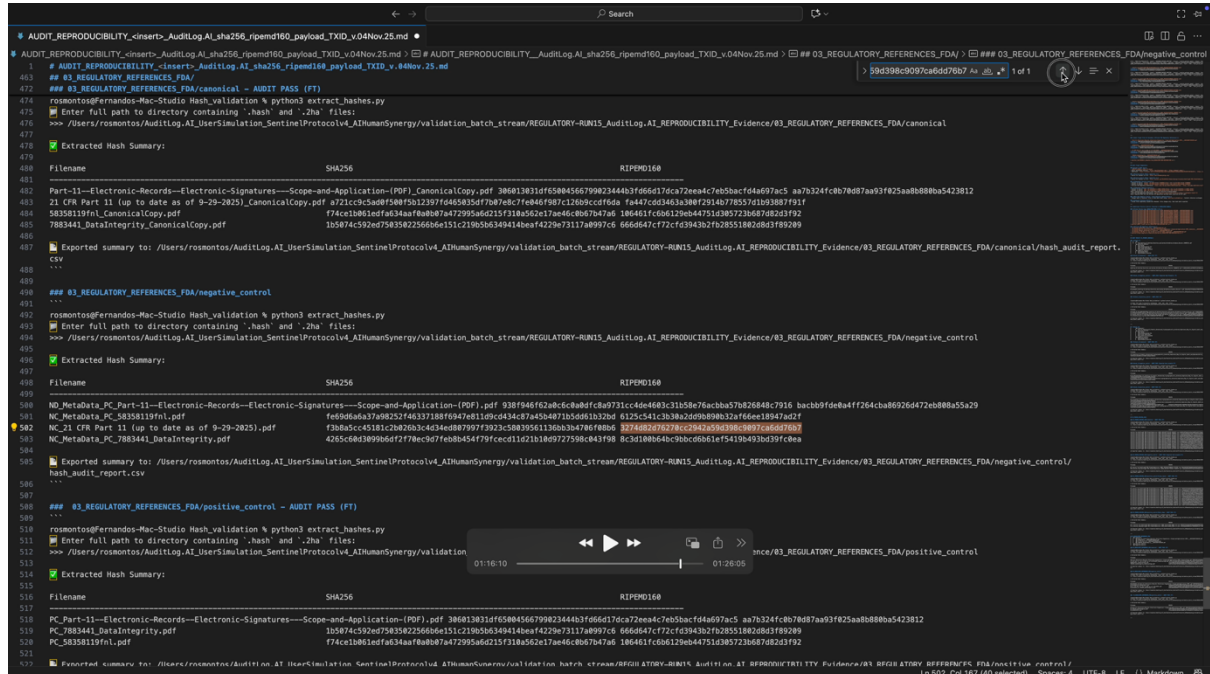
**Evidence File:**

*ts\_01\_16\_10\_AUDIT\_VScode\_VisualDiff\_FDA\_RIPEMD160\_Independent\_NC\_\_\_20251104T231150Z.png*

**Description:** VS Code diff for FDA NC (RIPEMD-160).

**Observation:** RIPEMD-160 differs from canonical/PC, search bar confirms 1 of 1 digest.

**Outcome:** Metadata negative-control detection — **PASS**.



## Metadata Integrity Verification — Negative Control (ecfr.gov Export)

**Evidence file:**

*Validate\_MetaData\_TerminalOutput\_v.09Nov.25.txt*

*Note: This evidence file was executed during stream/post-hoc verification; it will be formally registered under REGULATORY-RUN017.*

**CLI output excerpt:**

```
Last login: Sun Nov 9 10:23:37 on ttys002
rosmontos@Fernandos-Mac-Studio ~ % cd "/Users/rosmontos/Desktop/Validate_MetaData"
rosmontos@Fernandos-Mac-Studio Validate_MetaData % pdftinfo "NC_21 CFR Part 11 (up to date as
of 9-29-2025)___20251104T063215Z.pdf" | egrep "Producer|Pages|File size|PDF version"
pdftinfo "21 CFR Part 11 (up to date as of 9-29-2025)_CanonicalCopy___20251104T063215Z.pdf" |
egrep "Producer|Pages|File size|PDF version"
Producer: Prince 15.4 (www.princexml.com)
Pages: 6
File size: 73731 bytes
PDF version: 1.5
Producer: Prince 15.4 (www.princexml.com)
Pages: 6
File size: 73731 bytes
PDF version: 1.5
rosmontos@Fernandos-Mac-Studio Validate_MetaData % pdftotext "NC_21 CFR Part 11 (up to date
as of 9-29-2025)___20251104T063215Z.pdf" nc.txt
pdftotext "21 CFR Part 11 (up to date as of 9-29-2025)_CanonicalCopy___20251104T063215Z.pdf"
canonical.txt
diff -s canonical.txt nc.txt
Files canonical.txt and nc.txt are identical
```



```
rosmontos@Fernandos-Mac-Studio Validate_MetaData % strings "NC_21 CFR Part 11 (up to date as of 9-29-2025)____20251104T063215Z.pdf" | grep -m1 "/ID"
strings "21 CFR Part 11 (up to date as of 9-29-2025)_CanonicalCopy____20251104T063215Z.pdf" | grep -m1 "/ID"
/ID [<4E9C40018508427B9BFDCA1E2A4DB443> <4E9C40018508427B9BFDCA1E2A4DB443>]>>
/ID [<51E0A063F2A74646A50749C9776009EB> <51E0A063F2A74646A50749C9776009EB>]>>
rosmontos@Fernandos-Mac-Studio Validate_MetaData %
```

**Description:**

- Both PDFs are identical in every visible and textual respect (same producer, page count, file size, and text content).
- The extracted text is byte-for-byte identical ("Files canonical.txt and nc.txt are identical")
- The only binary difference is the automatically regenerated /ID tag in the PDF trailer, which changes the cryptographic hash without altering any document content.

**Observation:**

This field changes the cryptographic hash but has no impact on document content or appearance.

**Outcome:**

The dual-hash mismatch is attributable solely to metadata regeneration by the PDF engine and does not represent a content change. This highlights the sensitivity of AuditLog.AI in **proof-of-unchanged** verification.

---

## Regulatory References Positive Controls – Independent Sources

**Audit Status: PASS**

- Dual-hash SHA256 & RIPEMD160 **match on all independent POSITIVE CONTROL** files

**Verifier:** *Dr. Fernando Telles*

**CLI output excerpt:**

```
rosmontos@Fernandos-Mac-Studio Hash_validation % python3 extract_hashes.py
Enter full path to directory containing '.hash' and '.2ha' files:
>>>
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/positive_control
✓ Extracted Hash Summary:

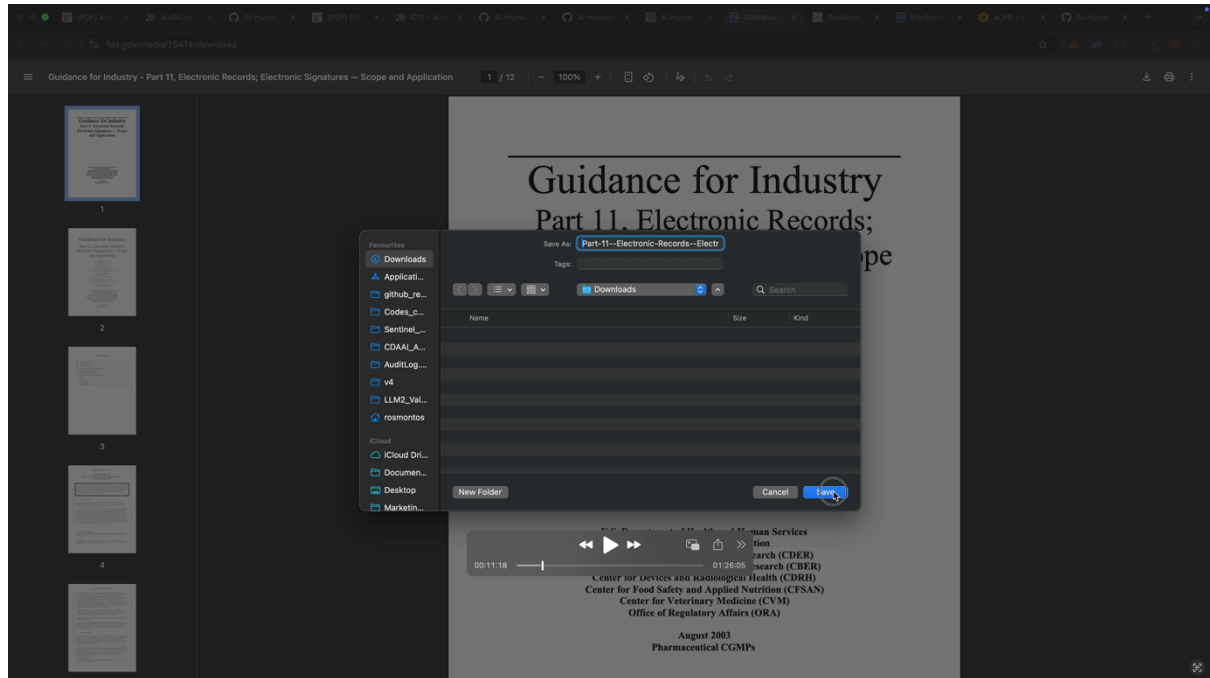
Filename SHA256
RIPEMD160

PC_Part-11--Electronic-Records--Electronic-Signatures---Scope-and-Application-(PDF).pdf
306013031df65004566799023444b3fd66d17dca72eea4c7eb5bacfd4a697ac5
aa7b324fc0b70d87aa93f025aa8b880ba5423812
PC_7883441_DataIntegrity.pdf
1b5074c592ed75035022566b6e151c219b5b6349414beaf4229e73117a0997c6
666d647cf72cfd3943b2fb28551802d8d3f89209
PC_58358119fnl.pdf
f74ce1b061edfa634aaf0a0b07a472995a6d215f310a562e17ae46c0b67b47a6
106461fc6b6129eb44751d305723b687d82d3f92

Exported summary to:
/Users/rosmontos/AuditLog.AI_UserSimulation_SentinelProtocolv4_AIHumanSynergy/validation_batch_stream/REGULATORY-RUN15_AuditLog.AI_REPRODUCIBILITY_Evidence/03_REGULATORY_REFERENCES_FDA/positive_control/hash_audit_report.csv
```

**Evidence File:**

ts\_00\_11\_18\_FDA\_Official\_PC\_Part\_11\_\_\_20251104T231150Z.png

**Description:** Independent positive control retrieval (Official FDA PDF).**Observation:** File context for canonical/PC verification against independent sources.**Outcome:** Positive-control context – **PASS**.

Audit completed 04 November 2025, time 17:27 AEST (UTC: 06:27).

Execute onsite, CDA AI Headquarters, 21 Shields Street, Flemington 3031 VIC, Australia.

No AI tools were used from commencement of official AUDIT execution at 4.02.31 pm AEST (05:02:31 UTC) 2025-11-04, I, Dr. Fernando Telles, executed the above audit in full (human-only execution).

Dr. Fernando Telles, BMedSc(Adv), MD(Dist)

CEO & Founder | CDA AI Pty Ltd

Lead Architect | AuditLog.AI

Governor | Sentinel Protocol v4.0

21 Shields Street, Flemington VIC 3031

[www.auditlog.ai](http://www.auditlog.ai) | [www.aihumansynergy.org](http://www.aihumansynergy.org)

[dr.telles@aihumansynergy.org](mailto:dr.telles@aihumansynergy.org)



"Anchoring trust in clinical research — one audit at a time."

# Audit Recording and Provenance Summary

## (Human Execution Confirmation)

### Recording Evidence File:

*Screen Recording 2025-11-04 at 4.02.31 pm\_\_\_20251104T063215Z.mov*

**SHA-256:** 8106f43767357ee5cf09ad989e26575ebb5e9c523aa8a009218a8b876afeab23

**RIPEMD-160:** 87fe17c157d8e01cc529fe2d4633f8afd2771d47

**Details:** Full screen recording, uninterrupted, from AUDIT start to conclusion (MacOs, primary monitor of dual-monitor setup, mouse clicks tracking enabled, microphone disabled).

**Kind:** *QuickTime movie*

**Size:** *8,756,130,607 bytes*

**Start time:** *2025-11-04 at 4.02.31 pm AEST (05:02:31 UTC)*

**Duration:** *01:26:05*

### OTS Proof:

*Screen Recording 2025-11-04 at 4.02.31 pm\_\_\_20251104T063215Z.mov.hash.ots*

**OTS SHA-256:** af3d99be0030f4433a642c37010f19554252938e5d62aa8b46067477e88902a2

**OTS TXID:** a03394fdb51c9a7d95675a3bc08b17d996a6a3d530b23bfd0e911b1a8b41c8c3

**Block Height:** 922144

**Merkle Root:** 72aa6d0df460eac1206659e7c920f534b49cdbfa1aa728d608d7dab510f0bb08

**Date of Existence:** 2025-11-04T07:22:22Z (Block 922144 UTC timestamp. *Source: blockstream.info*)

*Note: The complete recording is available to regulators on request under NDA.*

---

## Audit Recording Provenance Audit Log:

*audit\_log\_AuditLogAI.REG.GlobalSubmission.v4109\_20251104T063526.760012Z.json*

**Audit Meta ID:** *AuditLogAI.REG.GlobalSubmission.v4109*     **UTC:** *20251104T063526.760012Z*

**SHA-256:** *422375e72c67966909b6c3b87ecda5c23f1f8c81394d810910ddaf222809335b*

**RIPEMD-160:** *f025748d44ef62bb0108a80ae861bc50262d4913*

### Audit Log Contents:

```json

```
[
  {
    "timestamp": "2025-11-04T06:35:26.759459Z",
    "event": "AUDIT_BATCH_EVIDENCE_VERIFIED",
    "meta_id": "AuditLogAI.REG.GlobalSubmission.v4109",
    "input": {
      "batch_filenames": [
        "execution/Screen Recording 2025-11-04 at
4.02.31\u202fpm____20251104T063215Z.mov"
      ],
      "evidence_type": "SHA256-RIPEMD160 reproducibility (deferred)",
      "session_context": "AuditLogAI.REG.GlobalSubmission.v4-RUN-20251104-S01",
      "batch_screenshot_pre": "PRE_20251104T063214Z.png",
      "batch_screenshot_post": "POST_20251104T063226Z.png",
      "validation_step": "valis_batchauditlogger_template_v3.1 active. Meta-ID:
05_SCREENSHOTS_RECORDINGS_REGULATORY-RUN-20251104-S20, 1 files, delta=12s. folder_dual_hash
computed and checked.",
      "delta_seconds": 12,
      "executed_template": "valis_batchauditlogger_template_v3.1"
    },
    "output": {
      "status": "verifiable",
      "verifiable": true,
      "final_hash_disclosed": false,
      "audit_type": "REPRODUCIBILITY",
      "meta_id": "AuditLogAI.REG.GlobalSubmission.v4-LOG-
05_SCREENSHOTS_RECORDINGS_REGULATORY-RUN-20251104-S20",
      "folder_dual_hash": "43f3eb6ce0e93828a71561a4770f4a449793b182"
    },
    "audit": {
      "AI_used": true,
      "LLM_used": "LLM1",
      "human_verified": true,
      "module_version": "v.november04.25",
      "ai_editor_LLM_human_agreement": true,
      "VALIS_template_enforced": true,
      "reviewer": "Dr. Fernando Telles",
      "human_signature": {
        "signer": "DRTELLES",
        "decision": "approved",
        "reason": "batch verified; 1 files; \u00394=12s; PRE=PRE_20251104T063214Z.png;
POST=POST_20251104T063226Z.png",
        "signed_at": "2025-11-04T06:35:26.759494Z"
      },
      "AI_override": false
    },
    "timestamp_confirmed": true
  }
]
```

OTS Proof:

audit_log_AuditLogAI.REG.GlobalSubmission.v4109_20251104T063526.760012Z.hash.ots

OTS SHA-256: *7fd725e2dc2bdd0bc2570b3e1f6217ee0939bf8163df19d67236a3cea4a64b69*

OTS TXID: *a03394fdb51c9a7d95675a3bc08b17d996a6a3d530b23bfd0e911b1a8b41c8c3*

Block Height: *922144*

Merkle Root: *72aa6d0df460eac1206659e7c920f534b49cdbfa1aa728d608d7dab510f0bb08*

Date of Existence: 2025-11-04T07:22:22Z (Block 922144 UTC timestamp. *Source: blockstream.info*)

Folder Meta ID: *AuditLogAI.REG.GlobalSubmission.v4-LOG-05_SCREENSHOTS_RECORDINGS_REGULATORY-RUN-20251104-S20*

Folder RIPEMD-160: 43f3eb6ce0e93828a71561a4770f4a449793b182

Manifest CSV: *manifest_05_SCREENSHOTS_RECORDINGS_REGULATORY-RUN-20251104-S20.csv*

Provenance Anchoring Session Log:

session_log_AuditLogAI.REG.GlobalSubmission.v4071_20251104T063550.007774Z.json

REGULATORY-RUN ID: 015

Session Meta ID: *AuditLogAI.REG.GlobalSubmission.v4071* **UTC:** 20251104T063550.007774Z

SHA-256: 6936c54cc22e62ce5e43e46ed4453f61a4a500e68bf3a0f499f8dde0296d6c4b

RIPEMD-160: 9820d4fea8db0fd96e576cab3c3ac1f2f1bcb62

OTS Proof:

session_log_AuditLogAI.REG.GlobalSubmission.v4071_20251104T063550.007774Z.hash.ots

OTS SHA-256: 0a89f5b85f633a687fc16a85851fc36ad3b7fdf216a671c8a82c3ba61f8eb1b9

OTS TXID: a03394fdb51c9a7d95675a3bc08b17d996a6a3d530b23bfd0e911b1a8b41c8c3

Block Height: 922144

Merkle Root: 72aa6d0df460eac1206659e7c920f534b49cdbfa1aa728d608d7dab510f0bb08

Date of Existence: 2025-11-04T07:22:22Z (Bitcoin 922144 Block UTC timestamp. *Source: blockstream.info*)

Bitcoin OP_RETURN Anchor

Transaction ID: d2746ef74e5d678861b06018394af473ead923ce2ee589d527c2204cce8dc708

Payload: SENTINELISESSIONI9820d4fea8db0fd96e576cab3c3ac1f2f1bcb62l6936c54c

Block Height: 922142

Bitcoin Public Ledger Time Attestation: 2025-11-04T06:52:24Z (Bitcoin Block 922142 UTC timestamp. *Source: blockstream.info*)

Screenshot Provenance – Selected Frames from Execution Recording

All screenshots cited in this report as evidence of audit execution and external verification (e.g. blockchain explorers, VS Code visual diffs, dualhasher/extract_hashes runs) are registered in REGULATORY-RUN016 in the following **manifest evidence file**:

manifest_SelectedFrames_ExecutionScreenRecording_REGULATORY-RUN-20251104-S03.csv

SHA-256: 85ef94e6c6815b62b00694839d0b30a24e5f32ffbc2e35bee74a404ede8135e9

RIPEMD-160: 7b51eb4a1569ad81d5b2e846f204ed0c00c9071c

The full CSV is included in the frozen REGULATORY-RUN015 evidence archive and is available in the **AuditLog.AI reproducibility repository (public)**:

<https://github.com/TELAISYN/AI-Human-Synergy>

File path within the repository:

AuditLogAI.REG.GlobalSubmission.v4/REGULATORY-RUN015

Complete Provenance – Manifest CSVs (REGULATORY-RUN015)

All manifest CSVs generated during **REGULATORY-RUN015** (canonical, negative-control, and positive-control evidence sets; with associated *.hash*, *.2ha*, and *.hash.ots* sidecars) are also publicly available in the AuditLog.AI reproducibility repository.

Manifests record, for each evidence file:

- source context (*src*, *meta_id*, *rel_path*)
- SHA-256
- RIPEMD-160(SHA-256)
- VALIS-compliant frozen filename (*frozen_name*)

To preserve readability and avoid unnecessary length, the manifest rows are not reproduced in this document. Their integrity can be independently verified by checking the manifest's hashes against the published CSV.

Audit Plan — REGULATORY-RUN15 AuditLog.AI

REPRODUCIBILITY EVIDENCE

Software: AuditLog.AI

Protocol: Sentinel Protocol QMS

System: AI-Human Synergy™

Mode: Zero-Custody & Human-Verified

Version: v4

Author: Dr Fernando Telles

Date: 04 November 2025

Run ID: REGULATORY-RUN15

Operator: Dr Fernando Telles

Recorder: Full-screen session recording (MacOs, primary monitor of dual-monitor setup, mouse clicks tracking enabled, microphone disabled)

1 • Purpose & Scope

This run establishes the **final, regulator-grade reproducibility audit** for AuditLog.AI v4.0. It verifies that all prior anchored evidence (Ordinals 11 & 12, frozen session logs, and regulatory reference sets) remain reproducible and hash-parity consistent under human-verified re-execution using independent tools.

Upon successful anchoring, this audit will serve as the definitive **AuditLog.AI Reproducibility Proof** included in all global regulatory submissions (FDA / EMA / TGA).

Verification extends across:

- Ordinal 11 Runtime Execution Dossier
 - Ordinal 12 Compliance Matrix
 - Frozen session logs (RUNs 01-14; v4001–v4063)
 - FDA / EMA / TGA official reference PDFs
 - Positive and negative control copies
-

2 • Objectives

1. Re-execute dual-hash verification (`sha256` , `ripemd160`) for all canonical, positive, and negative controls.
 2. Confirm payload parity (`ripemd160|sha8`) with all recorded Bitcoin TXIDs.
 3. Validate that negative controls fail as expected.
 4. Freeze and anchor results under RUN 15 as the final audit artifact.
-

3 • Audit Methodology

Human Re-execution Steps

1. Execute `dualhasher_public_sentinel_v1.1.py` → Generate dual-hashes (`.hash` , `.2ha`) for each evidence file.
2. Run `extract_hashes.py` → Generate manifests (`*.csv`) listing file, sha256, ripemd160.
3. Manually validate hash parity (VS Code visual diff + live recording).
4. Extract payload from public blockchain explorer using AMPLIFY_LEDGER TXIDs.
5. Validate session-log hashes against payload and ledger entries.
6. Compile final Markdown summary report.
7. Freeze folder; apply dual-hash, OpenTimestamps stamp, and anchor all audit evidence files in REGULATORY-RUN015.

Verification Tools

- `dualhasher_public_sentinel_v1.1.py__20250809T030248.075732Z`
(Ripemd160 `c85ec8c5f4b364f08a00b351f8fca23577521d52` ; Sha256 `f84abe5a7e000b-cd2e513092f91151edc3f73fa33654e51e925acf711a94e4f0`)
- `extract_hashes.py__20250809T030248.072046Z`
(Ripemd160 `1769c85e6aefe249ba83ab61c3254b5fa002638c` ; Sha256 `a900d-f272130a8d3a55560993cb80d94a8f78bfba66f2bdf5684fcab296cbd`)

Note: The hashing tools used in this audit (`dualhasher_public_sentinel_v1.1.py` and `extract_hashes.py`) are open-source scripts that were previously registered and hashed in earlier SENTINFRA validation sessions. As these tools were not modified, and as they are publicly available in the AuditLog.AI repository, they were not re-hashed or included in the REGULATORY-RUN015 manifest CSVs. Regulators may independently verify their integrity using the public source.

Recording Protocol

Continuous screen recording from folder overview to final hash output. Available to regulators on request (under NDA). Select frames from recording to be included in final PDF for clarity.

4 • Validation Criteria

| Category | Expected Result | Pass/Fail Logic |
|-------------------|---------------------------------|-----------------|
| Canonical Files | Dual hash match + payload match | Pass |
| Positive Controls | Dual hash match | Pass |

| Category | Expected Result | Pass/Fail Logic |
|-------------------|------------------------------------|----------------------|
| Negative Controls | Dual hash mismatch | Pass (expected) |
| Fraud Tests | Detection of change via hash delta | Pass (expected fail) |

5 • Verification Targets

- **Primary A1:** Ordinal 11 – Runtime Execution Dossier
 - **Primary A2:** Ordinal 12 – Global Compliance Matrix
 - **Primary A3:** Frozen Session Logs (v4001 → v4063)
 - **Secondary B1:** FDA Regulatory Reference Documents
 - **Controls:** positive (+ve) / negative (–ve content & metadata)
-

6 • Deliverables

1. `AUDIT_REPRODUCIBILITY_<PASS/FAIL>_AuditLog.AI_sha256_ripemd160_payload_TXID_v.04Nov.25.md` (Audit report).
 2. Frozen archive with dual hash + OTS proofs.
 3. Video record of execution.
 4. Anchored TXID & block height record in AMPLIFY_LEDGER.
 5. Compilation of PDF conversions of `AuditPlan_v.04Nov25.md` (this document); and Final Audit report combined with select frames from video record of execution.
 6. Anchoring of select frames screenshots during live demonstration (Governance Advisor Demonstrations scheduled 05 November 2025, REGULATORY-RUN16)
 7. Individual evidence anchoring via OP_Return and Ordinal technology
 8. Open-Science Dual DOI publication
-

7 • Schedule

- **Preparation:** 29 October 2025 - 04 Nov 2025 05:00 UTC
 - **Execution:** 04 Nov 2025 05:00 UTC to completion (uninterrupted)
 - **Freeze + Anchor:** Immediately upon completion 04 Nov 2025
 - **Live Demonstration & Ordinal 13 PDF anchoring:** Scheduled video call (Governance Advisor to AuditLog.AI Outreach) Wednesday, Nov 5 2025 – 10:00 – 10:30 AM AEST (00:00 – 00:30 AM UTC).
-