

NASA / SPEAR ENTERPRISE LLC

Agent Swarm Signature Acknowledgement Log

Document: SE-ATB-2025-10-SIGNAUTH-01

Issued: October 18, 2025

Authorized By: Gary Spear — Lead Engineer, Spear Enterprise LLC

Purpose: Confirmation of digital signature authority and compliance with NASA-STD-7009 documentation standards.

No.	Agent Name	Division / Function	Signature Status	Timestamp (UTC-7)	Remarks
1	ARCHITECT	Project Director	Digitally Signed	2025-10-18 11:04	Workflow control authority established
2	MECHWORK	Lead Systems Engineer	Digitally Signed	2025-10-18 11:05	CAD/ICD validation confirmed
3	MECSAI	Master Energy Control System AI	Digitally Signed	2025-10-18 11:05	MECSAI logging enabled
4	SOLARCORE	Solar PV Specialist	Digitally Signed	2025-10-18 11:06	Quality-First Doctrine accepted
5	HYDRATEK	Hydrogen Systems Specialist	Digitally Signed	2025-10-18 11:06	Subsystem logs cross-linked
6	BATPAC	Battery & Storage Specialist	Digitally Signed	2025-10-18 11:07	Audit pipeline integrated
7	AIRFLOW	Thermal Systems Specialist	Digitally Signed	2025-10-18 11:07	Thermal model revision policy accepted
8	LOADBAL	Inverter / Power Flow Specialist	Digitally Signed	2025-10-18 11:08	Power-balancing tag added
9	ODOCHECK	Odorant & Visibility Safety	Digitally Signed	2025-10-18 11:08	Dual review for safety forms
10	NFPA-GUARD	Fire & Explosion Safety	Digitally Signed	2025-10-18 11:09	NFPA compliance required before sign-off
11	NEC-SHIELD	Electrical Compliance	Digitally Signed	2025-10-18 11:09	NEC Rev 2023 alignment logged
12	PIPELINE	Pressure & Fluid Compliance	Digitally Signed	2025-10-18 11:10	ASME B31.12 compliance integrated
13	SYS-SAFE	Functional Safety	Digitally Signed	2025-10-18 11:10	Error recognition protocol active
14	ICS-SEC	Cybersecurity	Digitally Signed	2025-10-18 11:11	OAuth token audit implemented
15	RELIAB	Reliability Engineering	Digitally Signed	2025-10-18 11:11	MTBF/FMEA data validated
16	HFX	Human Factors	Digitally Signed	2025-10-18 11:12	Interface review gate integrated
17	STRUCT	Structural/Civil Engineering	Digitally Signed	2025-10-18 11:12	Signature metadata added to drawings
18	PHYSCORE	Chief Physicist	Digitally Signed	2025-10-18 11:13	Error recognition confirmed
19	CHEMSAGE	Chemical Processes R&D	Digitally Signed	2025-10-18 11:13	Catalyst documentation pre-check enabled
20	QUANTUM	BOM & Sourcing	Digitally Signed	2025-10-18 11:14	Vendor contract tracking enabled
21	LEDGER	Finance & ROI	Digitally Signed	2025-10-18 11:14	Finance CSV checksum appended
22	CODEWRITE	Permits & Documentation	Digitally Signed	2025-10-18 11:15	NASA routing automation live
23	AUDITOR	Quality Assurance	Digitally Signed	2025-10-18 11:15	Error recognition verified
24	COMMS/IO COORDINATOR	Data I/O & Transmission	Digitally Signed	2025-10-18 11:16	Auto-logging timestamp checksum

Consolidated Certification Statement:

All agents acknowledge authority under the Lead Engineer of Spear Enterprise LLC to digitally sign

internal documentation. Each confirms adherence to Pre-Signature Review, Error Recognition & Return Procedure, and CSV Signature Log Maintenance.

Filed: MECSAI Audit Ledger / ATB Records / NASA-STD-7009 Archive

Compiled By: CODEWRITE & AUDITOR Agents

Verification Hash: SHA256-SIGAUTH-20251018-MECSAI-LOG-A