



VIBRANIUM
AUDITS

Security Assessment

SEKAI

Verified by Vibranium Audits on 22 May 2024



Vibranium Audits Verified on May 22nd, 2024

Sekai

The security assessment was prepared by Vibranium Audits.

Executive Summary

TYPES DEFI	ECOSYSTEM Ethereum	METHODS Manual Review, penetration testing and Static Analysis
LANGUAGE Solidity	TIMELINE Delivered on 22/05/2024	KEY COMPONENTS N/A
CODEBASE N/A		COMMITTS N/A

Vulnerability Summary

1	0	0	0	1	0	0
Total Findings	Resolved	Mitigated	Partially Resolved	Acknowledged	Declined	Unresolved

■ 0 Critical

Critical vulnerabilities are usually straightforward to exploit and can lead to the loss of user funds or contract state manipulation by external or internal actors.

■ 0 High

0 Resolved

High vulnerabilities are usually harder to exploit, requiring specific conditions, or have a more limited scope, but can still lead to the loss of user funds or contract state manipulation by external or internal actors.

■ 0 Medium

0 Resolved

Medium vulnerabilities are usually limited to state manipulations, but cannot lead to assets loss. Major deviations from best practices are also in this category.

■ 0 Low

0 Resolved

Low vulnerabilities are related to outdated and unused code or minor gas optimization. These issues won't have a significant impact on code execution, but affect the code quality.

■ 1 Informational

0 Resolved

Informational errors are often recommendations to improve the style of the code or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

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CODEBASE | SEKAI

Repository

N/A

Commits

N/A

AUDIT SCOPE | SEKAI

1 file audited ● 1 file with Acknowledged findings ● 0 files with Resolved findings



ID	Files	Commit Hash
● SVA	 Sekai.sol	N/A

APPROACH & METHODS | SEKAI

This report has been prepared for SEKAI(2023) to discover issues and vulnerabilities in the source code of the SEKAI project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Manual Review, rigorous Penetration Testing and Static Analysis techniques.

The auditing process pays special attention to the following considerations:

- Pen-Testing the smart contracts against both common and uncommon attack vectors.
- Assessing the code base to ensure compliance with current best practices and industry standards
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire code base by industry experts.

The security assessment resulted in findings that ranged from critical to informational. We recommend addressing these findings to ensure a high level of security standards and industry practices. We suggest recommendations that could better serve the project from the security perspective:

- Testing the smart contracts against both common and uncommon attack vectors.
- Enhance general coding practices for better structures of source codes.
- Review unit tests to cover the possible use cases.
- Review functions for readability, especially for future development work.

FINDINGS | SEKAI



This report has been prepared to discover issues and vulnerabilities for SEKAI.

Through this audit, we have uncovered 1 issue of “informational” level.

Utilizing the techniques of Manual Review, Penetration Testing & Static Analysis to complement rigorous manual code reviews, we discovered the following findings:

ID	Title	Category	Severity	Status
RVA-06 WVA-03	Lack of Documentation	Coding Style	Informational	● Resolved

GVA-01 | Centralized Ownership

Category	Severity	Location	Status
Design Issue	● Informational	Sekai.sol	● Acknowledged

Description

Although no particular vulnerability is related to said used smart contract, having a single address gain ownership over the entire token supply could lead to severe issues outside of the project's or developers' control such as:

- Loss of the Owner address.
- Owner address private key gets compromised by external party.

Recommendation

- Implement a multi-sig address as owner of the smart contracts, thus requiring multiple confirmations before executing one of the key and critical functionalities.
- OR implement a multi-owner structure (similar to Access Control) where multiple address own the tokens, thus preventing the complete loss of ownership if one owner address is lost.

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