



## Security Assessment: **VitalikMumDOGE Token**





February 12, 2024

- Audit Status: **Pass**
- Audit Edition: **Standard**
































# Risk Analysis

## Classifications of Manual Risk Results

Classification	Description
 Critical	Danger or Potential Problems.
 High	Be Careful or Fail test.
 Low	Pass, Not-Detected or Safe Item.
 Informational	Function Detected

## Manual Code Review Risk Results

Contract Privilege	Description
 Buy Tax	0%
 Sale Tax	0%
 Cannot Sale	Pass
 Cannot Sale	Pass
 Max Tax	0%
 Modify Tax	No
 Fee Check	Pass
 Is Honeypot?	Not Detected
 Trading Cooldown	Not Detected
 Can Pause Trade?	Pass
 Pause Transfer?	Not Detected
 Max Tx?	Pass
 Is Anti Whale?	Not Detected
 Is Anti Bot?	Not-Detected

Contract Privilege	Description
 Is Blacklist?	Not Detected
 Blacklist Check	Pass
 is Whitelist?	Not Detected
 Can Mint?	Fail
 Is Proxy?	Not Detected
 Can Take Ownership?	Not Detected
 Hidden Owner?	Not Detected
 Owner	no
 Self Destruct?	Not Detected
 External Call?	Detected
 Other?	Not Detected
 Holders	1
 Auditor Confidence	Critical Risk
 KYC Present	No
 KYC URL	

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.

# Project Overview

## Token Summary

Parameter	Result
Address	0xae4065D87FCc9b7C99596C68C464415eEF87A48A
Name	VitalikMumDOGE
Token Tracker	VitalikMumDOGE (VMUMDOGE)
Decimals	18
Supply	70,000,000,000
Platform	METIS
compiler	v0.8.19+commit.7dd6d404
Contract Name	VitalikMumDOGE
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	<a href="https://explorer.metis.io/address/0xae4065D87FCc9b7C99596C68C464415eEF87A48A/contract/1088/code">https://explorer.metis.io/ address/0xae4065D87FCc9b7C99596C68C464415eEF87A48A/ contract/1088/code</a>
Payment Tx	Corporate

## Main Contract Assessed Contract Name

Name	Contract	Live
VitalikMumDOGE	0xae4065D87FCc9b7C99596C68C464415eEF87A48A	Yes

## TestNet Contract Assessed Contract Name

Name	Contract	Live
VitalikMumDOGE	0xb985b10bAA93B066279e6d611A2E2e002c089FfC	Yes

## Solidity Code Provided

SolidID	File Sha-1	FileName
VMUMDOGE	7a43aea0244f4c13faf48253d58e093d	VMUMDOGE.sol
VMUMDOGE		
VMUMDOGE		
VMUMDOGE		
VMUMDOGE		
VMUMDOGE	undefined	

# Smart Contract Vulnerability Checks

**The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.**

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	VMUMDOGE.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	VMUMDOGE.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	VMUMDOGE.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	VMUMDOGE.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	VMUMDOGE.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	VMUMDOGE.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	VMUMDOGE.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	VMUMDOGE.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	VMUMDOGE.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	VMUMDOGE.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	VMUMDOGE.sol	L: 0 C: 0
SWC-111	Pass	Use of Deprecated Solidity Functions.	VMUMDOGE.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	VMUMDOGE.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	VMUMDOGE.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	VMUMDOGE.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-115	Pass	Authorization through tx.origin.	VMUMDOGE.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	VMUMDOGE.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	VMUMDOGE.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	VMUMDOGE.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	VMUMDOGE.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randomness.	VMUMDOGE.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	VMUMDOGE.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	VMUMDOGE.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	VMUMDOGE.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	VMUMDOGE.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	VMUMDOGE.sol	L: 0 C: 0
SWC-126	Pass	Insufficient Gas Griefing.	VMUMDOGE.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	VMUMDOGE.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	VMUMDOGE.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	VMUMDOGE.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U+202E).	VMUMDOGE.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	VMUMDOGE.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	VMUMDOGE.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	VMUMDOGE.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	VMUMDOGE.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	VMUMDOGE.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	VMUMDOGE.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.







## Privileged Functions (onlyOwner)

Please Note if the contract is Renounced none of this functions can be executed.

Function Name	Parameters	Visibility
renounceOwnership		Public
transferOwnership	address newOwner	Public
mint		External

## VMUMDOGE-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	 Low	VMUMDOGE.sol: L: 2264, C: 14	 Resolved

### Description

The given input is missing the check for the non-zero address.

The given input is missing the check for the missing required function.



### Remediation

We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...
require(receiver != address(0), "Receiver is the zero address");
...
...
require(value X limitation, "Your not able to do this function");
...
```

We also recommend customer to review the following function that is missing a required validation. missing required function.

## VMUMDOGE-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	 Low	VMUMDOGE.sol: L: 2264, C: 14	 Resolved



### Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes. The linked code does not create an event for the transfer.

### Remediation

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.

## VMUMDOGE-10 | Initial Token Distribution.

Category	Severity	Location	Status
Centralization / Privilege	 High	VMUMDOGE.sol: L: 2261 C: 14	 Resolved

### Description

All of the VitalikMumDOGE tokens are sent to the contract deployer when deploying the contract. This could be a centralization risk as the deployer can distribute tokens without obtaining the consensus of the community.

### Remediation






We recommend the team to be transparent regarding the initial token distribution process, and the team shall make enough efforts to restrict the access of the private key.

### Project Action






```
emit Transfer(address(0), _msgSender(), _tTotal);
```

# Technical Findings Summary

## Classification of Risk

Severity	Description
 Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
 High	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
 Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
 Low	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
 Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

## Findings

Severity	Found	Pending	Resolved
 Critical	0	0	0
 High	1	1	0
 Medium	0	0	0
 Low	2	2	0
 Informational	0	0	0
Total	3	0	4

# Social Media Checks

Social Media	URL	Result
Twitter		N/A
Other		N/A
Website	<a href="https://vmumdoge.com">https://vmumdoge.com</a>	Pass
Telegram		N/A

We recommend to have 3 or more social media sources including a completed working websites.

**Social Media Information Notes:**

**Auditor Notes:** undefined

**Project Owner Notes:**



# Assessment Results

## Score Results

Review	Score
Overall Score	88/100
Auditor Score	85/100
Review by Section	Score
Manual Scan Score	19
SWC Scan Score	37
Advance Check Score	32

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 84 Points for a higher standard, if a project does not attain 85% is an automatic failure. Read our notes and final assessment below.

## Audit Passed





## **Assessment Results**

### **Important Notes:**

- The Contract has been renounced.

**Auditor Score =85**  
**Audit Passed**



# Appendix

## Finding Categories

### Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

### Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

### Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how `block.timestamp` works.

### Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

### Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

### Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

### Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different requirements on the input variables than a setter function.

### Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.

# Disclaimer

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