

Smart Contract Audit

FOR

Pepe Escobar

DATED: 06 May 23'



AUDIT SUMMARY

Project name - Pepe Escobar

Date: 08 May, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: Passed

Issues Found

| Status | Critical | High | Medium | Low | Suggestion |
|--------------|----------|------|--------|-----|------------|
| Open | 0 | 1 | 0 | 0 | 1 |
| Acknowledged | 0 | 0 | 0 | 0 | 0 |
| Resolved | 0 | 0 | 0 | 0 | 0 |



USED TOOLS

Tools:

1- Manual Review:

a line by line code review has been performed by audit ace team.

2- BSC Test Network:

all tests were done on BSC Test network, each test has its transaction has attached to it.

3- Slither: Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

https://testnet.bscscan.com/token/0xe1610487de95aCEAF083874562C9D5F91f5a568f



Token Information

Token Name: Pepe Escobar

Token Symbol: \$ELPEPE

Decimals: 18

Token Supply: 1,000,000,000

Token Address:

0xb7374eaBDb80E8b59F45ffe3f08B3BAA4a98DD7f

Checksum:

ff6d6364364fae41a49e053a3bddf9c42529d470

Owner:

0x2BAEA30c14d0e434B78316cFA7742960739D77Dc

Deployer:

0x2BAEA30c14d0e434B78316cFA7742960739D77Dc



TOKEN OVERVIEW

Fees:

Buy Fees: upto 10 %

Sell Fees: upto 10 %

Transfer Fees: upto 10%

Fees Privilige: owner

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Priviliges: including or excluding from fees - changing swap threshold - modifying fees - enabling trades



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
- Manual review of the entire codebase by our experts, which is the process of reading source code line-byline in an attempt to identify potential vulnerabilities.
- Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
- Test coverage analysis determines whether the test cases are covering the code and how much code isexercised when we run the test cases.
- Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
- Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.



VULNERABILITY CHECKLIST





CLASSIFICATION OF RISK

Severity

- 🔷 Critical
- High-Risk
- Medium-Risk
- Low-Risk
- Gas Optimization/Suggestion

Description

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

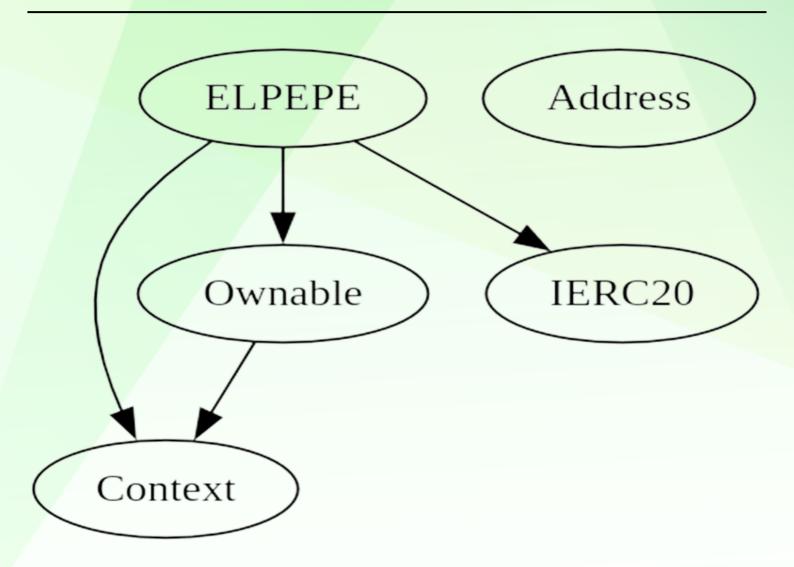
A vulnerability that has an informational character but is not affecting any of the code.

Findings

| Severity | Found |
|--|-------|
| ♦ Critical | 0 |
| ♦ High-Risk | 1 |
| ◆ Medium-Risk | 0 |
| ♦ Low-Risk | 0 |
| Gas Optimization /Suggestions | 1 |



INHERITANCE TREE





POINTS TO NOTE

- Owner is not able to set set buy/sell/transfer fees over (10%) each
- Owner is not able to set a max buy/transfer/wallet/sell amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to disable trades
- Owner is not able to mint new tokens
- Owner must enable trades for holders to be able to trade



```
| Contract |
                 Type
                               Bases
<mark>|;-----:|;-----:|;-----:</mark>-:|;------:|;-----:|;
    **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
| **Context** | Implementation | |||
| L | _msgSender | Internal 🦰 | | | |
| L | _msgData | Internal 🦰 | | |
111111
**Ownable** | Implementation | Context | | |
| L | <Constructor> | Public | | | | NO | |
| L | owner | Public | | NO | |
📙 renounceOwnership | Public 🛭 | 🛑 | onlyOwner |
📙 | transferOwnership | Public 🛮 | 🛑 | onlyOwner |
111111
| **IERC20** | Interface | |||
| L | totalSupply | External | | NO | |
| L | balanceOf | External | | NO | |
| L | transfer | External | | | NO | |
| L | allowance | External | | NO | |
| L | approve | External | | | NO | |
| L | transferFrom | External | | | NO | |
\Pi\Pi\Pi\Pi\Pi
| **Address** | Library | | | |
| L | isContract | Internal 🦰 | | |
| L | sendValue | Internal 🦰 | 🛑 | |
| L | functionCall | Internal 🦲 | 🧓 | |
| L | functionCall | Internal 🦲 | 🛑 | |
| L | functionCallWithValue | Internal 🦰 | 🛑 | |
| L | functionCallWithValue | Internal 🦰 | 🛑 | |
| L | functionCallWithValue | Private 🖺 | 📵 | |
111111
| **IUniswapV2Factory** | Interface | | | |
| L | feeTo | External | | NO | |
| L | feeToSetter | External | | NO | |
| L | getPair | External | | | NO | |
| L | allPairs | External | | NO | |
| L | allPairsLength | External | | NO | |
| L | createPair | External | | | NO | |
| L | setFeeTo | External | | | NO | |
| L | setFeeToSetter | External | | | NO | |
IIIIIII
| **IUniswapV2Pair** | Interface | |||
| L | name | External | | NO | |
```



```
| L | symbol | External | | NO | |
| L | decimals | External | | | NO | |
| L | totalSupply | External | | NO | |
| | balanceOf | External | | NO
| L | allowance | External | | NO | |
| L | approve | External | | | NO | |
| L | transfer | External | | 🛑 | NO | |
| L | transferFrom | External | | | NO | |
| L | DOMAIN SEPARATOR | External | | | NO | |
| L | PERMIT_TYPEHASH | External | | | NO | |
| L | nonces | External | | NO | |
📙 | permit | External 📗 | 🛑 | NO 📗
| L | MINIMUM_LIQUIDITY | External | | | NO | |
| L | factory | External | | NO | |
| L | token0 | External | | NO | |
| L | token1 | External | | NO | |
| L | getReserves | External | | NO | |
| L | price0CumulativeLast | External | | | NO | |
| L | price1CumulativeLast | External | | NO |
| L | kLast | External | | NO | |
| L | burn | External | | | NO | |
| L | swap | External | | | NO | |
| L | skim | External | | | NO | |
| L | sync | External | | | NO | |
| L | initialize | External | | | NO | |
\mathbf{H}
| **IUniswapV2Router01** | Interface | | | |
| L | factory | External | | NO | |
| L | WETH | External | | | NO | |
| L | addLiquidity | External | | | NO | |
| L | addLiquidityETH | External | | III | INO | |
| L | removeLiquidity | External | | | NO | |
| L | removeLiquidityETH | External | | | NO | |
| | removeLiquidityWithPermit | External | | | NO | |
| | removeLiquidityETHWithPermit | External | | | NO | |
| L | swapExactTokensForTokens | External | | | NO | |
| L | swapTokensForExactTokens | External | | | NO | |
| L | swapExactETHForTokens | External | | I | NO | |
| L | swapTokensForExactETH | External | | | NO | |
| L | swapExactTokensForETH | External | | | NO | |
```



```
| | quote | External | | NO | |
| | getAmountOut | External | | | NO | |
| L | getAmountin | External | | NO | |
| L | getAmountsOut | External | | | NO | |
| | getAmountsIn | External | | NO | |
\Pi\Pi\Pi\Pi\Pi
**IUniswapV2Router02** | Interface | IUniswapV2Router01 | | |
| | removeLiquidityETHSupportingFeeOnTransferTokens | External | | | NO! |
| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External | | | | NO | |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | | | | NO | |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | | | | NO | |
1111111
| **ELPEPE** | Implementation | Context, IERC20, Ownable | | |
| L | <Constructor> | Public | | | NO | |
| L | name | Public | | | NO | |
| L | symbol | Public | | | NO | |
| L | decimals | Public | | NO | |
| L | totalSupply | Public | | NO | |
| L | balanceOf | Public | | | NO | |
| L | transfer | Public | | | NO | |
| L | allowance | Public | | NO | |
| L | approve | Public | | | NO | |
| L | transferFrom | Public | | | | NO | |
| L | increaseAllowance | Public | | ( NO | |
| L | decreaseAllowance | Public | | | NO | |
| L | isExcludedFromReward | Public | | NO | |
| L | totalReflectionDistributed | Public | | NO | |
| L | deliver | Public | | ( ) | NO | |
| | reflectionFromToken | Public | | NO |
| L | tokenFromReflection | Public | | NO |
| L | excludeFromReward | Public | | | | onlyOwner |
| L | includeInReward | External | | | | onlyOwner |
| L | <Receive Ether> | External | | I NO | |
| L | claimStuckTokens | External | | ( onlyOwner |
| L | _reflectFee | Private 🦳 | 🧓 | |
| L | _getValues | Private 🤔 | | |
| L | _getTValues | Private 🦳 | | |
| L | _getRValues | Private 🦳 | | |
| L | getRate | Private 🦳 | | |
| L | _getCurrentSupply | Private <a>P</a> | | | |
```



```
| L | _takeLiquidity | Private 🦰 | 🛑 | |
| L | _takeMarketing | Private 🖺 | 🛑 | |
| | calculateLiquidityFee | Private 🛅 | | |
| | calculateMarketingFee | Private 🖰 | | |
| L | removeAllFee | Private 🦳 | 🧓 | |
| L | setBuyFee | Private 🦳 | 🥮 | |
| L | setSellFee | Private 🦳 | 🥮 | |
| | isExcludedFromFee | Public | | NO | |
| L | _approve | Private 🦳 | 🦲 | |
📙 enableTrading | External 📗 | 🛑 | onlyOwner |
📙 | _transfer | Private 傄 | 🧶 | |
\mid 🗀 | buybackAndBurn | Private 傄 | 🦲 | |
| L | setSwapTokensAtAmount | External | | | | onlyOwner |
| L | setSwapEnabled | External | | | | onlyOwner |
| L | tokenTransfer | Private 🦳 | 🛑 | |
| L | _transferStandard | Private 🤔 | 🧶 | |
| L | _transferToExcluded | Private 📍 | 🛑 | |
| L | _transferFromExcluded | Private 📍 | 🛑 | |
| L | _transferBothExcluded | Private 📍 | 🛑 | |
| L | excludeFromFees | External | | | | onlyOwner |
| L | changeMarketingWallet | External | | | | onlyOwner |
| L | setBuyFeePercentages | External | | | | onlyOwner |
| L | setSellFeePercentages | External | | | | onlyOwner |
| L | enableWalletToWalletTransferWithoutFee | External | | | | onlyOwner |
Legend
| Symbol | Meaning |
|:-----|
   | Function can modify state |
      | Function is payable |
```



STATIC ANALYSIS

```
nt250). theybackBurn (contracts/Token.sol#180)
Variable ELPFE. taket.iquidity(uint250). theybackBurn (contracts/Token.sol#80)
Variable ELPFE. transferStudies(address,address,uint250). theybackBurn (contracts/Token.sol#80)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#100)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#100)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#100)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#10)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#110) is too similar to ELPFE._transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#110)
Variable ELPFE. transferStudies(uint250,uint250,uint250). transferAemount (contracts/Token.sol#110) is too similar to ELPFE._transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#110) is too similar to ELPFE._transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#110)
Variable ELPFE. transferStudies(uint250,uint250,uint250). transferAemount (contracts/Token.sol#110)
Variable ELPFE. transferStudies(address,address,uint250). transferAemount (contracts/Token.sol#110
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):

https://testnet.bscscan.com/tx/0x53122f7f68c17ce0f6f24cedeb99d4bf7aa22901b04d444b98367a4c3fdc6b39

2- Buying when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x24e31c225a6c257b5b66dae1d348ac86ce3f71c76a1846557aa9c2dd0a97acd0

3- Selling when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x1a092619aa2f39caed2db8eaa0d3f4c53824c303f740095d94c6f1d8a7934c1a

4- Transferring when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x35ba3051963754ac0421ca990c 4c889a55de5e74a3757d5fc963fa5e327cb1a1

5- Buying when not excluded (up to 10% tax) (passed):

https://testnet.bscscan.com/tx/0x91b848be8de51a4a688ce838ee 0fe1045437c41ca21e192727748f7d1b7261c0

6- Selling when not excluded (up to 10% tax) (passed):

https://testnet.bscscan.com/tx/0xbe0d7aa2339e9b8c2b090ef06f1cd58fb239a04744d5d05f184ae5d12fd7c503



FUNCTIONAL TESTING

- 7- Transferring when not excluded (upto 10% tax) (passed): https://testnet.bscscan.com/tx/0xde9e0c124eb1f1a635fa9100047 6f7def8ada5303fbcae3962feaab448ccb29e
- 8- Internal swap (buyback And Burn and marketing fees) (passed):

https://testnet.bscscan.com/address/0xfe9afda8824182c0cb2cbddef75fd071d6592dde#internaltx



MANUAL TESTING

Centralization – Trades must be enabled

Severity: High

function: enableTrading
Status: Not Resolved

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {
   require(tradingEnabled == false, "Trading is already enabled");
   tradingEnabled = true;
}
```

Suggestion

To mitigate this centralization issue, we propose the following options:

- Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
- Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require
 multiple approvals for any changes to the mainRouter, adding an additional layer of security
 and reducing the centralization risk.
- 3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trades



MANUAL TESTING

Informational – naming convention

Status: Not Resolved

Overview:

_takeLiquidity is collecting fees for buyback not liquidity

Suggestion:

change the name to something more related to buyback, like "_takeBuyBackFee"



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