RANDOMNESS EVALUATION REPORT

FOR

NG ENTERTAINMENT LTD
WILD BUFFALO BONANZA, HTML5-DESKTOP; HTML5-MOBILE, 1.0.0

CONFIDENTIAL
CERTIFICATE NUMBER: E233829NTGMLTM

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SECTION 1. GENERAL INFORMATION

License Holder:	NG Entertainment Ltd 30/1 Kenilworth Court Sir Augustus Bartolo Street TA' Xbiex XBX 1093 Malta
Game Name:	Wild Buffalo Bonanza
Game Type:	Slot
Platform Type:	HTML5-Desktop; HTML5-Mobile
Game Version:	1.0.0
Applicable Technical Standards:	Licensing requirements of the Malta Gaming Authority ('MGA') Subsidiary Legislation 438.04 Remote Gaming Regulations Third Schedule, Regulation 25
Testing Laboratory:	eCOGRA Limited 2/F Berkeley Square House Berkeley Square London W1J 6 BD United Kingdom
Test Engineers:	Sumeshan Padayachee; Tshavhungwa Mukhanu; Jaquelene Krishen
Supervisor:	Thabang Maganedisa
Request for Report:	28 March 2023
Report Date:	03 April 2023
Certificate Number:	e233829NTGMLTM

In our opinion the game listed as tested in this report complies with the relevant sections of the licensing requirements of the Malta Gaming Authority ('MGA').

The test results obtained for NG Entertainment Ltd's Wild Buffalo Bonanza HTML5-Desktop; HTML5-Mobile 1.0.0 game produced statistically acceptable random numbers that were free of any significant statistical bias or predictability.

Pierre Jordan
Compliance Director

SECTION 2. INTRODUCTION

eCOGRA has been appointed by NG Entertainment Ltd to evaluate and certify the following Slot game for compliance with the relevant licensing requirements Subsidiary Legislation 438.04 Remote Gaming Regulations, Third Schedule, Regulation 25 of the Malta Gaming Authority ('MGA').

- Wild Buffalo Bonanza (1.0.0) - NG Entertainment Ltd

This certification report highlights our key findings as a result of the evaluation conducted on HTML5-Desktop; HTML5-Mobile, 1.0, which is the pre-production environment which is essentially the same as the live environment. The testing was conducted on the aforementioned platform established at NG Entertainment Ltd during the period 28 March 2023 to 03 April 2023.

Please note that this is an initial certification conducted over Wild Buffalo Bonanza, HTML5-Desktop; HTML5-Mobile , 1.0.0 and therefore this game certificate does not supersede any previous certifications.

SECTION 3. RNG COMPONENTS

The Random Number Generator (RNG) as detailed in Section 2 and used by NG Entertainment Ltd in their Wild Buffalo Bonanza 1.0.0 product was previously certified by GLI (Refer to RNG report: 413/19/001/UK/RTS/02). The scope of eCOGRA's randomness testing was limited to testing the randomness of the game output of the Wild Buffalo Bonanza 1.0.0 game.

Software Provider:	Refer to GLI RNG report: 413/19/001/UK/RTS/02
Software Provider Address:	
Product Name:	
Product Description:	
Jurisdiction:	
Jurisdiction address:	
Test entity:	
Test entity address:	
Date:	
Approval:	

SECTION 4. TEST RESULTS

Numerous recognised statistical and mathematical tests were performed on a 1,000,000 rows of sample data, provided by NG Entertainment Ltd, of the game output to verify the RNG operates in a random and fair manner. This included tests for probability (to ensure the expected number of occurrences), randomness (so that the following occurrence cannot be predicted with any degree of certainty) and uniformity (to determine that each possible outcome is equally likely over the long-term). The acceptance criteria for the statistical tests is a pass at a 95% confidence level.

SECTION 5. GAME DESCRIPTION

Wild Buffalo Bonanza (1.0.0)

Game Description:
Wild Buffalo Bonanza is a game played with 20 fixed paylines and each game costs a minimum of 20 fixed coins. The game features a stacked feature, free spins and a buy bonus feature.

Further details regarding the betting characteristics, features and detailed game rules can be found in the game instructions which can be provided upon request.

SECTION 6. PERCENTAGE RETURN TO PLAYER ('RTP')

Game Name	Theoretical RTP %	eCOGRA RTP % Recalculation
Wild Buffalo Bonanza	94.15% Buy Bonus: 94.51%	94.19% Buy Bonus: 94.52%

The Theoretical RTP percentage indicated in the table above is extracted from the game documentation as provided by NG Entertainment Ltd eCOGRA recalculated the RTP percentage by performing additional independent mathematical calculations on the output of simulation game data.

SECTION 7. GAME SOFTWARE DETAILS

The scope of the game evaluation and certification applies solely to the critical game files, game versions and associated hashes provided in the tables below:

Game Files

File Name / Identifier	Version Date	Version Number	SHA-1 Hash Sum
rng.lib.php	21/06/2019	php 7	850D4C84879E52C8A3F4752488A3634869052196
line_wins_handler.inc.php	20/01/2020	1.0	4265BFE2ACF6549D2A8C2708DDCCC26E6657D396
ConfigurationWBB	28/03/2023	1.0.0	969FE6F5C53B61FA15CB07C87287F4328FFF2631

SECTION 8. REVIEW FINDINGS

Remote Gaming Regulations	Rating	Comments
Third Schedule - Regulation 25 - Technical requirement for gaming system		
1. The gaming system must:		
a. faithfully follow the game rules published by the operator; and	Compliant	
b. provide over time no more than the expected house advantage to the operator.	Not applicable	Not applicable to this game type.
2. Both the gaming and financial transactions must be congruent and secure.	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
3. The gaming system must satisfy the following criteria for randomness, following Schneier:		
a. the data must be randomly generated, passing appropriate statistical tests of randomness;	Compliant	Refer to RNG certificate: 413/19/001/UK/RTS/02
b. the data must be unpredictable, i.e. it must be computationally infeasible to predict what the next number will be, given complete knowledge of the algorithm or hardware generating the sequence, and all previously generated numbers;	Compliant	Refer to RNG certificate: 413/19/001/UK/RTS/02
c. the series cannot be reliably reproduced, i.e. if the sequence generator is activated again with the same input (as exactly as is reasonably possible) it will produce two completely unrelated random sequences.	Compliant	Refer to RNG certificate: 413/19/001/UK/RTS/02
4. The outcome of any game event, and the return to the player, must be independent of the CPU, memory, disk or other components used in the playing device used by the player.	Compliant	Refer to RNG certificate: 413/19/001/UK/RTS/02
5. The game or any game event outcome must not be affected by the effective bandwidth, link utilisation, bit error rate or other characteristic of the communication channel between the gaming system and the playing device used by the player.	Compliant	

Remote Gaming Regulations	Rating	Comments
Third Schedule - Regulation 25 - Technical requirement for gaming system		
6. The gaming system must be able to display for each game the following information on the current page or on a page directly accessible from the current page via a hyperlink:		
a. the name of the game;	Compliant	
b. restrictions on play;	Compliant	
c. instructions on how to play, including a pay-table for all prizes and special features;	Compliant	Wallet functionality is not directly managed by the supplier.
d. the player's current account balance;	Compliant	
e. unit and total bets permitted;	Compliant	
f. the rules of the game.	Compliant	
7. All financial reports produced by the gaming system must be congruent with gaming transaction reports and conversely: Provided that all such reports shall be readily and freely available to the Authority.	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
8. The gaming system must: a. be capable of producing monthly auditable and aggregate financial statements of gaming transactions, and	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
b. calculate accurately all taxation and other monies due to the Authority.	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
9. The gaming system must maintain information about all games played, including:		
a. the identity of the player;	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
b. the time the game began as recorded on the game's server;	Compliant	The recording of the results within the gambling system are not managed by the supplier.
c. the balance on the player's account at the start of the game;	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
d. the stakes placed in the game (time stamped by the games server);	Compliant	The recording of the results within the gambling system are not managed by the supplier.
e. the game status (in progress, complete, etc.);	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
f. the result of the game (time stamped by the games server);	Compliant	The recording of the results within the gambling system and account functionality are not managed by the supplier.

Remote Gaming Regulations	Rating	Comments
Third Schedule - Regulation 25 - Technical requirement for gaming system		
g. the time the game ended as recorded by the games server;	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
h. the amount won or lost by the player; and	Compliant	The recording of the results within the gambling system and account functionality are not managed by the supplier.
i. the balance on the player's account at the end of the game.	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
10. The gaming system must maintain information about significant events as follows:		
a. large wins;	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
b. transfers of funds in excess of such amount as the Authority may from time to time direct by notice in writing to the operator;	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
c. changes made by the operator to game parameters.	Not applicable	The scope of assessment is limited to aspects directly managed by the supplier.
11. Any variations to any of the requirements specified in this Schedule shall be submitted to the Authority for its approval by notice in writing.	Not applicable	No variations identified for the product under certification.