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To: Robert G. Rivera, Chairman
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From: Mike Fernandez, Administration Division Director *MRF*

Date: December 3, 2020

Re: 2020 Biennial Security Study of the Texas Lottery – Public Report

Enclosed please find a copy of the Public Report for the 2020 Biennial Security Study of the Texas Lottery. The 2020 Security Study was conducted by Barry Dunn and a summary of the study will be presented at the December Commission meeting. The Public Report will be made available on the agency website following the commission meeting.

Texas Government Code §§ 466.020(e)-(f) states:

(e) At least once every two years, the executive director shall employ an independent firm that is experienced in security, including computer security and systems security, to conduct a comprehensive study of all aspects of lottery security, including:

- 1) lottery personnel security;
- 2) sales agent security;
- 3) lottery operator and vendor security;
- 4) security against ticket counterfeiting and alteration and other means of fraudulent winning;
- 5) security of lottery drawings;
- 6) lottery computer, data communications, database, and systems security;
- 7) lottery premises and warehouse security;
- 8) security of distribution of tickets;
- 9) security of validation and payment procedures;
- 10) security involving unclaimed prizes;
- 11) security aspects of each lottery game;
- 12) security against the deliberate placement of winning tickets in lottery games that involve preprinted winning tickets by persons involved in the production, storage, transportation, or distribution of tickets; and
- 13) other security aspects of lottery operations.

(f) The executive director shall provide the commission with a complete report of the security study conducted under Subsection (e). The commission shall provide the governor and the legislature, before the convening of each regular legislative session, with a summary of the security study that shows the overall evaluation of the lottery's security.

The State Lottery Act, at Tex. Gov't Code Ann. §466.022(b), protects the full detailed report of the 2020 Security Study from release to the public because such a release would compromise the lottery games and threaten the integrity and security of the operation of the lottery.

Please do not hesitate to contact me if you have any questions about the report or any of the findings.

Texas Lottery Commission

Lottery Security Study Public Report



August 31, 2020

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EXECUTIVE SUMMARY

Introduction

The Executive Director of the Texas Lottery (Lottery or Agency) is responsible for employing an independent firm to conduct a comprehensive Security Study of all aspects of Texas Lottery security at least once every two years in accordance with the State Lottery Act, State Government Code Chapter 466, specifically §§ 466.020(e). The State Lottery Act specifically identifies 12 aspects of security to be included in the Study, as well as a 13th category for other security aspects of Lottery operations. BerryDunn did not identify any other security aspects of lottery operations that required review outside of the twelve items. This Study covered September 1, 2018 – July 31, 2020.

BerryDunn was engaged to perform a Risk Assessment and subsequent Security Study of controls that mitigate significant security-related risks. The results of the Risk Assessment (Phase II) provided input for determining where to focus efforts in evaluating controls that help mitigate significant risks to the achievement of the Lottery's objectives (Phase III).

Our Risk Assessment identified controls, which were reviewed during our Phase III Assessment. The identified controls are the core of the Lottery's mission of incorporating the highest security and integrity standards into its products and operations and demonstrate the Lottery's commitment to reducing risks through an established and mature control environment.

Our Phase III Study was completed through interviews with key stakeholders at the Lottery and their critical vendors, observation of controls, systems, and Lottery operations, and detailed inspection of documentation, system configurations, and evidence of the completion of controls throughout the Study period.

Overall, the Lottery has an excellent security posture and experienced, well-trained staff managing the security program and key business processes. Lottery claims processing, ticket warehousing and distribution, retailer services, security, compliance, consumer protection activities, and draw management are mature operations supported by strong leadership, comprehensive policies and procedures, segregation of duties, and control monitoring activities. In addition, Lottery, IGT, and Elsym systems are designed and operating to help reduce the likelihood of fraudulent winning.

PROJECT APPROACH

The goal of the Security Study was to help the Lottery ensure the security and integrity of Lottery games and operations. This Study involved the Lottery, the Lottery's CGS operator (IGT TX), the scratch ticket manufacturers - SGI, Pollard, and IGT, and other prime lottery services contracts/vendors of the Agency as needed. The 13 areas of focus included:

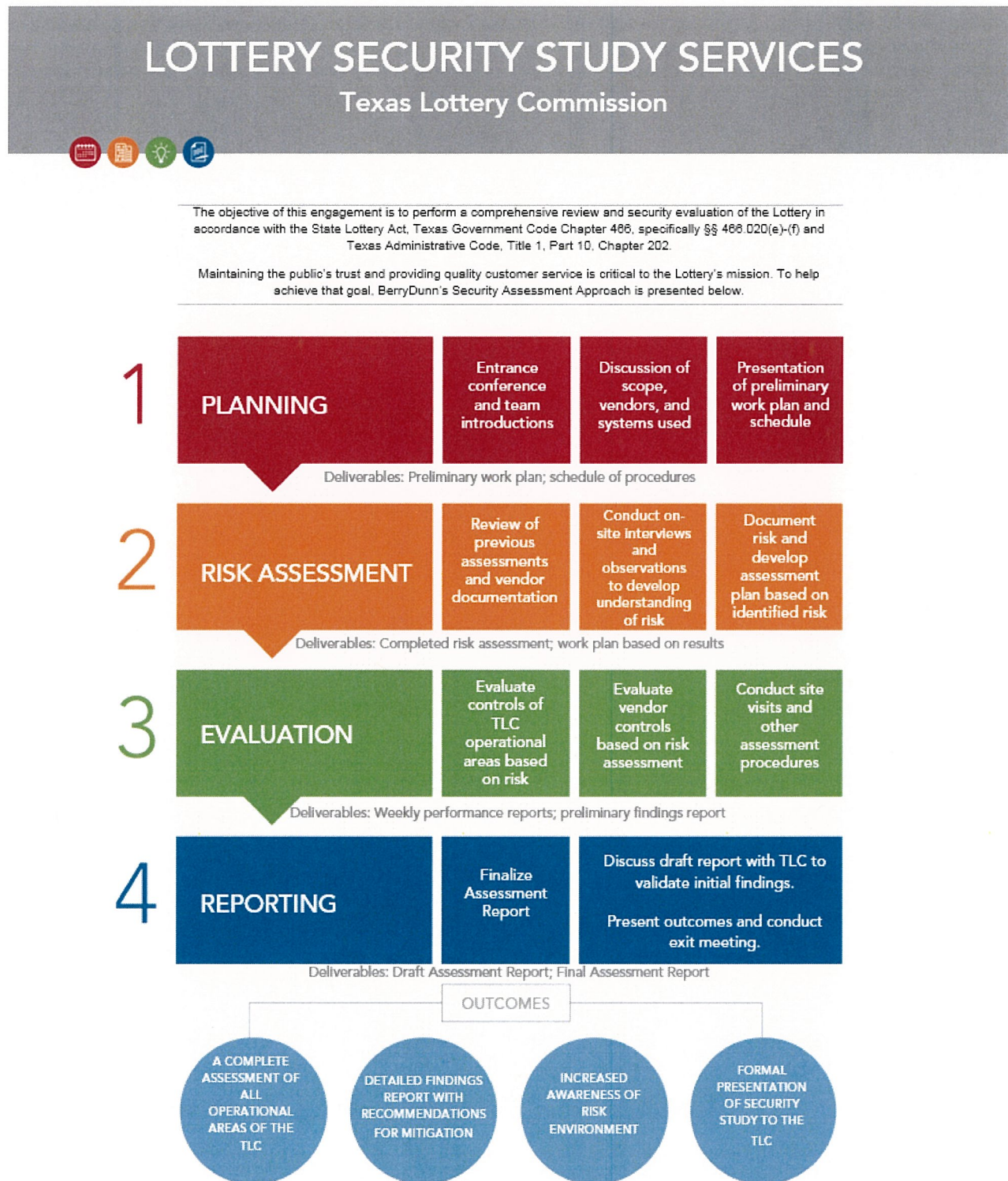
1. Lottery Personnel Security
2. Sales Agent Security
3. Lottery Operator and Vendor Security
4. Security Against Ticket Counterfeiting and Alteration and Other Means of Fraudulent Winning
5. Security of Lottery Drawings
6. Lottery Computer, Data Communications, Database, and Systems Security
7. Lottery Premises and Warehouse Security
8. Security of Distribution of Tickets
9. Security of Validation and Payment Procedures
10. Security Involving Unclaimed Prizes
11. Security Aspects of Each Lottery Game
12. Security Against the Deliberate Placement of Winning Tickets in Lottery Games that Involve Preprinted Winning Tickets by persons Involved in the Production, Storage, Transportation, or Distribution of Tickets
13. Other security aspects of lottery operations

Note: BerryDunn did not identify any other security aspects of lottery operations that required review outside of the first twelve items.

BerryDunn's Approach

BerryDunn's approach was developed based on our understanding of the Agency's specific requirements, extensive experience in the lottery industry, knowledge of risk management and IT governance standards, and a long history of successful internal control and security evaluations.

Figure 1: BerryDunn's Approach



Planning: Phase I

BerryDunn confirmed the security study scope and timing, established project milestones, discussed expectations and assigned responsibilities in a planning meeting the Texas Lottery management team on March 3, 2020. In addition, BerryDunn identified status-reporting requirements, identified key stakeholders, and developed an initial schedule of interviews and discussions.

Risk Assessment: Phase II

The Risk Assessment phase incorporated a review of the Lottery's risk environment as well as identification of controls that mitigate the risks. The risks and controls "discovered" during this phase provided the foundation for a more comprehensive review of mitigating controls performed in Phase III of this Study. The Risk Assessment phase was conducted during the period January 12, 2020 through April 30, 2020. The final Risk Assessment report was provided to the Lottery on April 30, 2020 and presented to the Lottery on May 5, 2020. Risk Assessment procedures included:

- Inspected and assessed documentation including: policies and procedures, process documentation, prior reports, and third-party reviews
- Reviewed documentation evidence to confirm the existence of controls to mitigate Lottery risks (test of one) to verify that control is in place
- Observed key processes and operations
- Performed inquiry of key personnel to enhance our understanding of Lottery processes
- Periodically met with Lottery management to provide progress updates and communicate project status.

BerryDunn's past experience with IGT systems, IGT DCA operations, IGT Austin Technology Center (ATC), IGT Printing systems and operations, SGI printing operations, and MUSL 2 audits allowed us to draw certain conclusions about the vendor systems, draw processes, and scratch ticket integrity and their impact on the Lottery's risk assessment.

BerryDunn also noted that several areas included within the scope of the Study are frequently addressed through third-party and/or McConnell and Jones, LLP internal audit assessments. In the cases where previous assessments were completed, BerryDunn reviewed such reports, considered the results, and risk scored the areas as appropriate.

Assessment reports BerryDunn considered included:

- System and Organization Controls (SOC) reports of IGT, IGT Printing, and SGI Printing
- Third-party audit reports of Pollard Banknote
- Quarterly IGT Contract Compliance Reports
- Internal Audit Reports on various topics

Study: Phase III

Based on the results of Phase II, BerryDunn performed a Study of security and internal controls. During the course of this phase, the following activities were performed:

- Inspected and assessed documentation including: security policies and procedures, process documentation, prior reports, and third-party reviews
- Performed inquiry of key personnel to enhance understanding of Texas Lottery processes
- Observed key processes and operations
- Selected and inspected representative samples of documentation to confirm the existence of controls to mitigate the Lottery's risks
- Assessed processes and controls associated with the Lottery's personal, sensitive, and confidential data and information resources identified during the Risk Assessment
- Communicated concerns to the assigned Project Manager as they were identified, and performed additional analysis as required
- Met with Lottery management to provide periodic progress updates and communicate preliminary findings

We identified one finding and additional opportunities for improvement to provide recommendations to the Lottery to continue to enhance its strong security environment. The basis for our finding and opportunities for improvement include:

- Our experience within the Lottery industry. In the past five years we have worked with over 30 state lotteries and their vendors
- Government Code Chapter 466, State Lottery Act
- Texas Administrative Code Chapter 202 (TAC 202)
- Multi-State Lottery Association (MUSL) Security Rule 2 and API requirements
- World Lottery Association (WLA) Security Control Standard (WLA-SCS:2012)

RESULTS

Overall, the Lottery has a strong security posture and experienced, well-trained staff managing the security program and key business processes. Lottery claims processing, warehousing and distribution, retailer services, and drawings are mature operations supported by comprehensive and detailed policies, procedures, segregation of duties, and internal controls.

In this engagement, BerryDunn did not perform an audit or attestation engagement as defined by the American Institute of Certified Public Accountants (AICPA), as the purpose of such inspections is to express an overall opinion on the Lottery's controls. Furthermore, the nature of information systems is such that deficiencies, errors, or fraud may exist and not be detected. Therefore, BerryDunn does not guarantee that all control deficiencies were detected in Phase III of this Study.

Findings represent where a control was established in the Risk Assessment through observation, inspection, or reperformance, but the results did not meet expectations per current policy and procedures. While this section represents specific deviations from the control environment, **BerryDunn believes that none of the findings would affect the accuracy, fairness, or integrity of gaming.** Management already had plans to address the finding and certain opportunities for improvement in our report through additional training and education.

Strengths Observed




In testing the Lottery's security controls as part of the Phase III Study, we identified the following overall security process strengths including, but not limited to the following:

- Well-established and mature control environment
- Compliance Programs
- Consumer Protection controls
- Internal Audit Programs
- Contract Compliance of the Central Gaming System provider
- Focused and experienced Information Resources Department
- Focused and experienced Operations Department
- Focused and experienced Security Department
- Focused and experienced Enforcement Department
- Independent Auditing of 100% of Lottery draws
- Mature business continuity and emergency response procedures
- Dedicated roles for information security at the Lottery

Scoring

Opportunities for improvement are classified by a high, medium, and low risk ranking to provide the Lottery with prioritization recommendations (see key in Table 1 below). In addition to the opportunities for improvement, BerryDunn has provided recommended remediation actions for the Lottery.

Table 1: Study Risk Description

Risk	Description
 High Risk	Represents a significant security risk or non-compliance with a regulatory requirement or law. High-risk areas require immediate management attention.
 Medium Risk	Represents a security improvement or issue that may pose a moderate risk to the Lottery. Medium risks should be addressed within six months.
 Low Risk	Represents a process or best-practice improvement. Low risk areas can be addressed within one year.

We identified one finding during the course of the Study. Of the 12 focus areas, the finding occurred in the following area:

- Lottery Operator and Vendor Security

We provided a detailed report with the specific finding noted and associated recommendation to the Lottery Executive Team.

In addition, we identified nine opportunities for improvement. Of the 12 focus areas, we noted opportunities for improvement in the following:

- Lottery Operator and Vendor Security
- Lottery Computer, Data Communications, Database, and Systems Security
- Security Aspects of Each Lottery Game

We identified zero high risk, six moderate risk, and three low risk opportunities for improvement. We provided a detailed report with the specific opportunities for improvement and associated recommendations to the Lottery Executive Team.