

# Memorandum

**Date:** August 10, 2012

**To:** National Indian Gaming Commission

**From:** Tribal Gaming Working Group

**Subject:** Proposed Part 547

The Tribal Gaming Working Group (“TGWG”) is pleased to submit the following comments in response to the National Indian Gaming Commission’s (“NIGC”) Proposed Technical Standards for Gaming Equipment Used in the Play of Class II Games (“Proposed Rule”). As you are aware, the “TGWG” is comprised of representatives of the Class II gaming industry, including elected tribal officials, tribal gaming regulators and operators, gaming equipment manufacturers and suppliers, gaming laboratories, tribal organizations, attorneys, and a broad spectrum of technical experts. Co-Chaired by Stephanie Bryan of the Poarch Band of Creek Indians, Matthew Morgan of the Chickasaw Nation, and Jamie Hummingbird of the Cherokee Nation of Oklahoma, this coalition worked tirelessly over the last several years to rework the Class II MICS and Technical Standards in an effort to develop a set of regulations better suited to the unique and ever-changing Class II industry.

With regard to the Technical Standards, the TGWG is pleased that the NIGC incorporated many of the TGWG and Tribal Advisory Committee’s (“TAC”) recommendations into the Proposed Rule and commends the NIGC for improving many portions of Part 547. That being said, some areas of concern remain. After much review and discussion, we concluded that the most effective way to provide useful comments was to provide the NIGC with a “red-line” of the Proposed Rule, which is attached hereto. This “red-line” represents the culmination of two months of extensive group discussions and provides the NIGC with detailed responses to the questions noted in the Preamble to the Proposed Rule, suggested language changes, and explanatory notes. We address these concerns both in this letter and in the attached red-line document.

Although the TGWG believes that all of its comments in the red-line document are important, one of our primary concerns with the Proposed Rule is with the grandfather provisions. As discussed in these comments, the TGWG is deeply concerned that a number of the NIGC’s proposed changes will have an inadvertent negative impact on both grandfathered and fully compliant Class II gaming systems. The TGWG respectfully seeks the NIGC favorable consideration of its comments.

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The technical standards were originally promulgated on November 10, 2008. Prior to the promulgation the TGWG submitted extensive comments outlining its concerns in relation to the original proposed rule. In the final rule many of our concerns were addressed, however some important ones were not. The proposed revisions to Part 547 addresses most of the remaining objections to the existing rule. However, our concerns in relation to the “grandfather” provisions remain. Were the NIGC to accept the TGWG’s proposed revisions, all of its remaining concerns would be addressed.

The TGWG observed that on August 7, 2012, the NIGC published a bulletin clarifying its intent in relation to the operation of the existing grandfather provision. We agree with the NIGC that the sunset clause in the existing standards operates to provide a five-year period in which to bring Class II gaming systems manufactured or in play on November 10, 2008, into full compliance with the existing technical standards and would only operate to require the removal of those Class II gaming systems that could not meet the technical standards through modification by November 10, 2013 (the sunset deadline). However, the proposed revision to the grandfather provisions is drafted in a way that appears to require all grandfathered Class II gaming systems to be removed from operation by November 10, 2013 regardless of whether they have been certified or brought fully into compliance with 25 C.F.R. Part 547. Moreover, the proposed revision does not address those systems that have been certified since November 10, 2008, but by operation of the proposed substantive revisions, one must conclude that such certification would be invalidated because the systems could not have been tested against the revised standards proposed for Part 547. Thus, in effect the Proposed Rule would operate to create two categories of grandfathered Class II gaming systems: 1) those in operation on November 10, 2008; and 2) those placed into operation after November 10, 2008.

The issuance of the August 7, 2012 bulletin is useful in clarifying the NIGC’s intent with regard to the construction of the existing rule, however it is the sunset clause in the proposed provision, when read together with the definition of “grandfathered Class II gaming systems,” if promulgated can be construed to require the removal of all grandfathered Class II gaming systems. Please note that at no point in the original rulemaking was any evidence or data provided indicating security or integrity concerns in relation to such Class II gaming systems. Based on the bulletin, we surmise that it is not the NIGC’s intent to alter the existing grandfather provision in such a way as to require the removal of all grandfathered Class II gaming systems, but it is our position that the grandfather provision should be revised to clarify that intent.

With regard to any concern the NIGC may have in relation to the extensive deletions we propose to the grandfather provision in the attached red-line document, we note that these provisions are now obsolete since these requirements must by now have been met. Retention of this language would only serve to complicate the application of the regulation to those Class II gaming systems that have been manufactured and placed into operation since November 10, 2008, all of which must be fully certified under the existing standard. The proposed deletions, thus, will not thwart the overall purpose of the regulation because each system is subject to

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certification under the standards in effect at the time it was placed into operation. Moreover, our proposed revision will make it much simpler to revise the standards in the future because there will be no need to craft language to address multiple categories of grandfathered systems with each revision. In other words, our proposed revision will spare the NIGC from having to make ever more complicated revisions to the grandfather provision with each subsequent revision of Part 547.

The other major concern we have in relation to Part 547 is that it does not contain a provision clarifying the prospective application of the rule. During the original rule making, numerous commenters urged the NIGC to include such a provision. As a general principle of law, retroactive application is disfavored even in relation to legislation because it “takes away or impairs vested rights acquired under existing laws, creates a new obligation(s), imposes a new duty(ies), or attaches a new disability(ies), in respect to transactions or considerations already past.”<sup>1</sup> The federal courts have instructed that analyses in relation to laws of retroactive application must be guided by three “familiar considerations” that the Supreme Court has clearly enunciated: reasonable reliance, fair notice, and settled expectations.<sup>2</sup>

Applying these judicial principles to the instant matter, by coming into compliance and undertaking the associated costs, tribes should have a settled expectation that these certifications may be relied upon. Such settled expectation is disturbed if new or revised standards operate to require new additional obligations for continued compliance. To illustrate, the existing §547.14(b)(2)(i) provides that numbers produced by the random number generator must satisfy certain tests for randomness.

Originally the section permitted use of one of ten various statistical tests. However, the Proposed Rule specifies that three of these tests – the chi-square test, the runs test, and the serial correlation test – are “mandatory statistical tests for randomness.” The Proposed Rule thus converts previously optional tests into mandatory tests. If a Class II gaming system was not evaluated against all three of these tests in 2008 – tests that at the time were optional – the Class II gaming system will no longer comply with the technical standards, thereby invalidating the certification of all Class II gaming systems and requiring all tribes and/or manufacturers to absorb the costs for recertification without any indication or evidence of significant security or integrity risks associated with such previously certified Class II gaming systems.

We urge the NIGC to adopt the TGWG’s recommended revisions to the Proposed Rule. We are confident that the TGWG’s proposed revisions properly capture the NIGC’s stated intent, comport with principles of federal administrative law pertaining to prospective application of regulations, and ensure that compliance costs are contained without sacrificing

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<sup>1</sup> Miller v. Florida, 482 U.S. 423, 430 (1987)

<sup>2</sup> Landgraf v. USI Film Prods., 511 U.S. 244, 270, 114 S.Ct. 1483, 128 L.Ed.2d 229 (1994)

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integrity or security interests. We request that language be added to clarify that nothing in the regulation is intended to prohibit the continued use of any Class II game, component, or system that was previously certified against the grandfather provisions or any judicial ruling.

Next, we understand that in considering whether substantive amendments to the grandfathering provisions in Section 547.5 are warranted, the NIGC, as stated in the Preamble to the Proposed Rule, did not receive sufficient facts during prior comment periods to support any amendments to the grandfathering provisions. It has requested the public to provide specific facts and information in response to a number of specific questions to support such revisions.

Although we appreciate the NIGC's desire for this data, even with the two week extension of the deadline for comment, we have found that we had insufficient time and resources to collect the information, compile it, and complete an economic analysis for submission within the comment period. Further, the TGWG solicited data from numerous sources, but many declined to provide such information due to its sensitive proprietary nature. We are aware that some tribal governments and tribal associations have attempted data collections, but are experiencing similar difficulties. Given the public nature of the comment process this reluctance is certainly understandable. We encouraged industry organizations, manufacturers, tribes, and all other interested parties to respond to the NIGC's questions directly with as much information as they can in light of the public nature of the process. We have, however, accumulated some information, which we believe may prove useful to the NIGC as it considers this important matter.

We learned, for example, that there are approximately 50,000 Class II player interfaces in operation in Indian Country today. This number does not include hand-held player interfaces, which we believe may amount to another 30,000 units actively in use. Neither does this include simple electronic bingo cards and other types of player interfaces, which we were unable to collect data on. It should also be noted that these numbers cannot represent the total number of player interfaces in use in the Class II gaming industry, but we are simply unable to collect such data given time and resource limitations.

Furthermore, we are unable to verify the percentage of this total number of player interfaces and other Class II gaming system components that fall under the grandfather provision in the 2008 rule. We do note that by operation of the language contained in the Proposed Rule, recertification of all Class II gaming systems would be required. We can surmise to a reasonable degree of certainty that the hardship imposed by the sunset clauses in both the existing and the Proposed Rule would fall disproportionately on Oklahoma tribes and those tribes that have been unable to secure a tribal-state gaming compact.

In Oklahoma, for example, Class II games may make-up 30-100% of a tribe's gaming floor. One Oklahoma tribe has approximately 7,200 Class II player interfaces on the gaming floor of which approximately 5,000 fall under the grandfather provision and would have to be

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removed under the proposed sunset provision. We understand that those systems could remain in use if they were brought into full compliance, however, this imposes an unwarranted and overly burdensome financial and resource cost to the industry. For those tribal governments particularly dependent on Class II gaming, it is extremely urgent that the NIGC reconsider the language of the grandfather clause because as proposed it would operate to require removal of these systems in just over one year even if they are otherwise certified as compliant. The economic impact of such effect would prove extremely damaging to some tribal governments and catastrophic for others.

We certainly recognize that the NIGC is looking for information upon which to base a decision as to how to address the grandfather provision of the rule, and have encouraged tribal governments, manufacturers, and others to provide as much data as possible to assist the NIGC in its deliberations. Without a focused study and economic impact analysis, however, it is simply not possible for the TGWG to provide all the information the NIGC seeks. Given the scope of the potential economic harm, we urge the NIGC to conduct such analysis if it concludes that such data is vital to its decision with regard to the grandfather provision, particularly in relation to the sunset clause.

In closing the TGWG would like to extend its thanks to the NIGC for undertaking its regulatory review process. We recognize that the NIGC has invested a great deal of time and effort and it is truly appreciated. It is our hope that the NIGC will lend favorable consideration to the TGWG's suggested revisions to the Proposed Rule. We believe that to forego revision of the existing grandfather provision would constitute a missed opportunity to promulgate a regulation that is fairer, less costly, more reasonable, and simpler to modify in the future.

**PART 547 – MINIMUM TECHNICAL STANDARDS FOR GAMING EQUIPMENT USED WITH THE PLAY OF CLASS II GAMES**

Sec.

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Authority: 25 U.S.C. 2706(b).

### § 547.1 What is the purpose of this part?

The Indian Gaming Regulatory Act, 25 U.S.C. 2703(7)(A)(i), permits the use of electronic, computer, or other technologic aids in connection with the play of Class II games. This part establishes the minimum technical standards governing the use of such aids.

### § 547.2 What are the definitions for this part?

For the purposes of this part, the following definitions apply:

*Account access component.* A component within a Class II gaming system that reads or recognizes account access media and gives a patron the ability to interact with an account.

*Account access medium.* A magnetic stripe card or any other medium inserted into, or otherwise made to interact with, an account access component in order to give a patron the ability to interact with an account.

*Advertised top prize.* The highest single prize available based on information contained in the prize schedule.

*Agent.* A person authorized by the gaming operation, as approved by the TGRA, to make decisions or perform tasks or actions on the behalf of the gaming operation. This definition permits the use of computer applications to perform the function(s) of an agent.

TGWG Notes as of 6/26: We believe that the removal of “This definition permits the use of computer applications to perform the function(s) of an agent” may be suitable in technical standards but feel strongly that it is an absolutely **critical** part of the definition in Part 543. To eliminate inconsistencies and confusion between the two parts for this definition this proposed change is added to the definition of Agent in both parts.

*Audit mode.* The mode where it is possible to view Class II gaming system accounting functions, statistics, etc. and perform non-player-related functions.

*Cancel credit.* An action initiated by the Class II gaming system where some or all of a player’s credits are removed by an attendant and paid to the player.

*Cashless system.* A system that performs cashless transactions and maintains records of those cashless transactions.

*Cashless transaction.* A movement of funds electronically from one component to another.

*CD-ROM.* Compact Disc – Read Only Memory.

*Chair.* The Chair of the National Indian Gaming Commission.

*Class II gaming.* Class II gaming has the same meaning as defined in 25 U.S.C. 2703(7)(A).

*Class II gaming system.* All components, whether or not technologic aids in electronic, computer, mechanical, or other technologic form, that function together to aid the play of one or more Class II games, including accounting functions mandated by these regulations.

*Commission.* The National Indian Gaming Commission established by the Indian Gaming Regulatory Act, 25 U.S.C. 2701 *et seq.*

*Coupon.* A financial instrument of fixed wagering value, usually paper, that can only be used to acquire non-cashable credits through interaction with a voucher system. This does not include instruments such as printed advertising material that cannot be validated directly by a voucher system.

*Critical memory.* Memory locations storing data essential to the functionality of the Class II gaming system.

*DLL.* A Dynamic-Link Library file.

*Download package.* Approved data sent to a component of a Class II gaming system for such purposes as changing the component software.

*DVD.* Digital Video Disk or Digital Versatile Disk.

*Enroll.* The process by which a class II gaming system identifies and establishes communications with an additional system component to allow for live gaming activity to take place on that component.

*EPROM.* Erasable Programmable Read Only Memory – a non-volatile storage chip or device that may be filled with data and information, that once written is not modifiable, and that is retained even if there is no power applied to the system.

*Electromagnetic interference.* The disruption of operation of an electronic device when it is in the vicinity of an electromagnetic field in the radio frequency spectrum that is caused by another electronic device.

*Electrostatic discharge.* A single event, rapid transfer of electrostatic charge between two objects, usually resulting when two objects at different potentials come into direct contact with each other.

*Fault.* An event that when detected by a Class II gaming system causes a discontinuance of game play or other component functions.

*Financial instrument.* Any tangible item of value tendered in Class II game play, including, but not limited to, bills, coins, vouchers and coupons.

*Financial instrument acceptor.* Any component that accepts financial instruments, such as a bill validator.

*Financial instrument dispenser.* Any component that dispenses financial instruments, such as a ticket printer.

*Financial instrument storage component.* Any component that stores financial instruments, such as a drop box.

*Flash memory.* Non-volatile memory that retains its data when the power is turned off and that can be electronically erased and reprogrammed without being removed from the circuit board.

*Game software.* The operational program or programs that govern the play, display of results, and/or awarding of prizes or credits for Class II games.

*Gaming equipment.* All electronic, electro-mechanical, mechanical, or other physical components utilized in the play of Class II games.

*Hardware.* Gaming equipment.

*Interruption.* Any form of mis-operation, component failure, or interference to the Class II gaming equipment.

*Modification.* A revision to any hardware or software used in a Class II gaming system.

*Non-cashable credit.* Credits given by an operator to a patron; placed on an Class II gaming system through a coupon, cashless transaction or other approved means; and capable of activating play but not being converted to cash.

*Patron.* A person who is a customer or guest of the gaming operation and may interact with a Class II game. Also may be referred to as a “player”.

*Patron deposit account.* An account maintained on behalf of a patron, for the purpose of depositing and withdrawing cashable funds for the primary purpose of interacting with a gaming activity.

*Player interface.* Any component or components of a Class II gaming system, including an electronic or technologic aid (not limited to terminals, player stations, handhelds, fixed units, etc.), that directly enables player interaction in a Class II game.

*Prize schedule.* The set of prizes available to players for achieving pre-designated patterns in the Class II game.

*Program storage media.* An electronic data storage component, such as a CD-ROM, EPROM, hard disk, or flash memory on which software is stored and from which software is read.

*Progressive prize.* A prize that increases by a selectable or predefined amount based on play of a Class II game.

*Random number generator (RNG).* A software module, hardware component or combination of these designed to produce outputs that are effectively random.

*Reflexive software.* Any software that has the ability to manipulate and/or replace a randomly generated outcome for the purpose of changing the results of a Class II game.

TGWG Notes as of 6/26: NIGC rep stated during a consultation that the concern with the proposed language was not only to prevent depriving the player of something but to also prevent awarding the player something that was not a result of the random outcome. TGWG is thinking that any “Good Neighbor” type activity that is not part of the payable would be considered a promotion. GLI believes NIGC’s intent is that the class II gaming system can never look at the historical activity or status of the game or player (e.g. platinum card member, bingo game would end, player losing, player winning, among others) to deprive or award something to the player. In the case that the player is playing in accordance with the game rules and the random outcome and player choices are not manipulated based on historical activity or status for the player or the game (e.g. platinum card member, bingo game would end, player losing, player winning, among others) it is not considered reflexive. As long as that is NIGC’s intent for this definition the TGWG is comfortable with it. It may be appropriate that this be

addressed in the preamble to be sure the intent of standards regarding reflexive software can easily be understood; examples are helpful.

*Removable/rewritable storage media.* Program or data storage components that can be removed from gaming equipment and be written to, or rewritten by, the gaming equipment or by other equipment designed for that purpose.

*Server.* A computer that controls one or more applications or environments within a Class II gaming system.

*Test/diagnostics mode.* A mode on a component that allows various tests to be performed on the Class II gaming system hardware and software.

*Testing laboratory.* An organization recognized by a TGRA pursuant to § 547.5(~~fg~~).

*TGRA.* Tribal gaming regulatory authority, which is the entity authorized by tribal law to regulate gaming conducted pursuant to the Indian Gaming Regulatory Act.

*Unenroll.* The process by which a ~~class~~Class II gaming system disconnects an enrolled system component, disallowing any live gaming activity to take place on that component.

*Voucher.* A financial instrument of fixed wagering value, usually paper, that can only be used to acquire an equivalent value of cashable credits or cash through interaction with a voucher system.

*Voucher system.* A component of the Class II gaming system that securely maintains records of vouchers and coupons; validates payment of vouchers; records successful or failed payments of vouchers and coupons; and controls the purging of expired vouchers and coupons.

### **§ 547.3 Who is responsible for implementing these standards?**

(a) *Minimum standards.* These are minimum standards and a TGRA may establish and implement additional technical standards that do not conflict with the standards set out in this Part.

(b) *No Limitation of Technology.* This part should not be interpreted to limit the use of technology or to preclude the use of technology not specifically referenced.

(c) *Only applicable standards apply.* Class II gaming system equipment and software must meet all applicable requirements of this part. For example, if a Class II gaming system lacks the ability to print or

accept vouchers, then any standards that govern vouchers do not apply. These standards do not apply to associated equipment such as voucher and kiosk systems.

(d) *State Jurisdiction.* Nothing in this part shall be construed to grant to a state jurisdiction over Class II gaming or to extend a state's jurisdiction over Class III gaming.

#### **§ 547.4 What are the rules of general application for this part?**

(a) *Fairness.* No Class II gaming system shall cheat or mislead users. All prizes advertised must be available to win during the game. A Test-test laboratory must calculate and/or verify the mathematical expectations of game play, where applicable, in accordance with the manufacturer stated submission. The results must be included in the test laboratory's report to the TGRA. At the request of the TGRA, the manufacturer must also submit the mathematical expectations of the game play to the TGRA.

(b) *Approved equipment and software only.* All gaming equipment and software used with Class II gaming systems must be identical in all respects to a prototype reviewed and tested by a testing laboratory and approved for use by the TGRA pursuant to § 547.5(a) through (ed).

(c) *Proper functioning.* All gaming equipment and software used with Class II gaming systems must perform according to the manufacturer's design and operating specifications.

#### **§ 547.5 How does a tribal government, TGRA, or tribal gaming operation comply with this part?**

TGWG Notes as of 6/26: The changes recommended by TGWG in this section are designed to eliminate confusion between the existing standards and the new standards. As stated in comments provided on the Discussion Draft for this Part and prior to the publication of this proposed Part, we are very concerned that the proposed language could be misunderstood by future users of these standards to mean that all Class II gaming systems certified as compliant with Part 547 effective November 10, 2008 are somehow invalid. We are confident that it was not NIGC's intention to invalidate all previously certified Class II gaming systems and the following recommended changes clarify that intent.

We strongly recommend that NIGC consider the role that "grandfathering" plays in clarifying the identity of Class II games that were or may be in dispute with states regarding what is covered or not covered in a compact; grandfathering and court decisions protected those games for Indian Country when dealing with other governments.

We also find that the NIGC proposed changes are inconsistent with how federal agencies typically address manufactured product in the rule making process. It would be extraordinary for a federal rule to mandate an industry wide recall of a product that does not pose any significant threat to life and limb.

Based on the NIGC comments in the preamble of the proposed Part 547 published 6/1/12, we recommend that the NIGC seek the necessary data they need from federal courts and agencies to complete the review and consideration of our concerns. Though we are trying to collect data and encouraging others to do so, the TGWG does not have ready access to all potentially applicable records. Executive Order 12866, Regulatory Flexibility Act, should be considered and is an important reference for who has the burden of research. We are aware that several industry organizations and tribes are collecting and intend to provide the requested data to NIGC and encourage the NIGC to continue collecting data that will represent the full potential impact to Class II gaming before adopting changes in this section.

~~(a) *Limited immediate compliance.* A tribal gaming regulatory authority TGRA shall:~~

~~(1) Require that all Class II gaming systems software that affects the play of the Class II game be submitted, together with the signature verification required by § 547.8(f), to be certified by a testing laboratory recognized pursuant to paragraph (f) of as compliant with the standards contained in this section Part within 120 days after November 10, 2008 prior to operation of the Class II gaming system, except as provided in paragraph (b) of this section;~~

~~(2) Require that the testing laboratory test the submission to the standards established by § 547.8(b), § 547.8(f), § 547.14, and to any additional technical standards adopted by the TGRA;~~

~~—(3) Require that the testing laboratory provide the TGRA with a formal written report setting forth and certifying to the findings and conclusions of the test;~~

~~—(4) Make a finding, in the form of a certificate provided to the supplier or manufacturer of the Class II gaming system, that the Class II gaming system qualifies for grandfather status under the provisions of this section, but only upon receipt of a testing laboratory's report that the Class II gaming system is compliant with § 547.8(b), § 547.8(f), § 547.14, and any other technical standards adopted by the TGRA. If the TGRA does not issue the certificate, or if the testing laboratory finds that the Class II gaming system is not compliant with 547.8(b), § 547.8(f), § 547.14, or any other technical standards adopted by the TGRA, then the gaming system shall immediately be removed from play and not be utilized.~~

~~—(5) Retain a copy of any testing laboratory's report so long as the Class II gaming system that is the subject of the report remains available to the public for play;~~

~~—(6) Retain a copy of any certificate of grandfather status so long as the Class II gaming system that is the subject of the certificate remains available to the public for play; and~~

~~—(7) Require the supplier of any player interface to designate with a permanently affixed label each player interface with an identifying number and the date of manufacture or a statement that the date of manufacture was on or before November 10, 2008. The tribal gaming regulatory authority shall also require the supplier to provide a written declaration or affidavit affirming that the date of manufacture was on or before November 10, 2008.~~

(b) *Grandfather provisions.* All previously certified Class II gaming systems, including those manufactured before, on or after November 10, 2008, ~~and certified pursuant to paragraph (a) but prior to the effective date~~ of this ~~section~~ Part, ~~are constitute~~ grandfathered Class II gaming systems, for which the following provisions apply:

(1) ~~Grandfathered Class II gaming systems may continue in operation for a period of five years from November 10, 2008.~~

~~—(2) Grandfathered Class II gaming systems shall be available for use at any tribal gaming facility subject to approval by the TGRA, which shall transmit its notice of that approval, identifying the grandfathered Class II gaming system and its components, to the Commission.~~

(~~3~~2) As permitted by the TGRA, individual hardware or software components of a grandfathered Class II gaming system may be repaired or replaced to ensure proper functioning, security, or integrity of the grandfathered Class II gaming system.

(~~4~~3) All modifications that affect the play of a grandfathered Class II gaming system must be approved pursuant to paragraph (~~e~~d) of this section, except for the following:

(i) Any software modifications that the TGRA finds will maintain or advance the grandfathered Class II gaming system's overall compliance with this part ~~or any applicable provisions of part 543 of this chapter~~, after receiving a new testing laboratory report that the modifications are compliant at a

minimum with the applicable standards ~~established by § 547.8(b), § 547.14~~ of Part 547 effective November 10, 2008 (as published in the Federal Register 60527 Vol. 73, No. 198 on October 10, 2008), and any other standards adopted by the TGRA;

(ii) Any hardware modifications that the TGRA finds will maintain or advance the grandfathered Class II gaming system's overall compliance with this part ~~or any applicable provisions of part 543 of this chapter, after receiving a new testing laboratory report that the modifications are compliant at a~~ minimum with the applicable standards of Part 547 effective November 10, 2008 (as published in the Federal Register 60527 Vol. 73, No. 198 on October 10, 2008), and any other standards adopted by the TGRA; and

(iii) Any other modification to the software of a grandfathered Class II gaming system that the TGRA finds will not detract from, compromise or prejudice:

(A) The proper functioning, security, or integrity of the grandfathered Class II gaming system, and

(B) The grandfathered Class II gaming system's overall compliance with the requirements of this part ~~or any applicable provisions of part 543 of this chapter~~ other standards adopted by the TGRA.

(iv) ~~No such modification~~ Modifications may only be implemented ~~with~~ out the approval of the TGRA. The TGRA shall maintain a record of the modification so long as the grandfathered Class II gaming system that is the subject of the modification remains available ~~to the public for play~~ for use in a Class II gaming operation and shall make the record available to the Commission upon request. The Commission will only make available for public review records or portions of records subject to release under the Freedom of Information Act, 5 U.S.C. 552; the Privacy Act of 1974, 5 U.S.C. 552a; or the Indian Gaming Regulatory Act, 25 U.S.C. 2716(a).

(c) Compliance – generally.

(1) Except as provided in paragraph (b) of this section compliance with the applicable standards of this Part shall be applied prospectively.

(2) Any Class II gaming system subject to a judicial determination of its lawfulness shall be deemed to be in compliance with this Part.

~~(ed)~~ Submission, testing, and approval – generally. Except as provided in paragraphs (b) ~~and (d)~~ of this section, a TGRA must not permit the use of any Class II gaming system, or any associated cashless system or voucher system or any modification thereto, in a tribal gaming operation unless:

(1) The Class II gaming system, cashless system, voucher payment system, or modification thereto has been submitted to a testing laboratory;

(2) The testing laboratory tests the submission to the standards established by:

(i) This part; and

(ii) ~~Any applicable provisions of part 543 of this chapter that are testable by the testing laboratory;~~

~~and~~

~~(iii) The TGRA;~~

(3) The testing laboratory provides a formal written report to the party making the submission, setting forth and certifying to its findings and conclusions; and noting compliance with any standard established by the TGRA pursuant to ~~(e)paragraph (2)(iii)~~ of this section;

(4) The testing laboratory's written report confirms that the operation of each submitted model of a player interface has been certified that when operated within manufacturer specifications it will not be compromised or affected by electrostatic discharge, liquid spills, electromagnetic interference, radio frequency interference, or any other tests required by the TGRA;

TGWG Notes as of 6/26: The use of the phrase “each player interface” is a concern because no test lab actually tests every single player interface. Further it is important to note that any such testing should be performed operating the device in accordance with manufacturer specifications to ensure the test is within the device design.

(5) Following receipt of the testing laboratory's report, the TGRA makes a finding that the Class II gaming system, cashless system, or voucher system conforms to the standards established by:

(A) This part;

(B) Any applicable provisions of part 543 of this chapter that are testable by the testing laboratory;

and

(C) The TGRA.

(6) The TGRA must retain a copy of the testing laboratory's report required by paragraph (c) of this section so long as the Class II gaming system, cashless system, voucher system, or modification thereto that is the subject of the report remains available to the public for play in its gaming operation.

~~(de)~~ *Emergency hardware and software modifications.*

(1) A TGRA, in its discretion, may permit the modification of previously approved hardware or software to be made available for play without prior laboratory testing or review if the modified hardware or software is:

(i) Necessary to correct a problem affecting the fairness, security, or integrity of a game or accounting system or any cashless system, or voucher system; or

(ii) Unrelated to game play, an accounting system, a cashless system, or a voucher system.

(2) If a TGRA authorizes modified software or hardware to be made available for play or use without prior testing laboratory review, the TGRA must thereafter require the hardware or software manufacturer to:

(i) Immediately advise other users of the same hardware or software of the importance and availability of the update;

(ii) Immediately submit the new or modified hardware or software to a testing laboratory for testing and verification of compliance with this part and any applicable provisions of part 543 of this chapter that are testable by the testing laboratory; and

(iii) Immediately provide the TGRA with a software signature verification tool meeting the requirements of § 547.8(f) for any new or modified software.

(3) If a TGRA authorizes a software or hardware modification under this paragraph, it must maintain a record of the modification and a copy of the testing laboratory report so long as the Class II gaming system that is the subject of the modification remains available to the public for play and must make the record available to the Commission upon request. The Commission will only make available for public review records or portions of records subject to release under the Freedom of Information

Act, 5 U.S.C. 552; the Privacy Act of 1974, 5 U.S.C. 552a; or the Indian Gaming Regulatory Act, 25 U.S.C. 2716(a).

(~~ef~~) *Compliance by charitable gaming operations.* This part does not apply to charitable gaming operations, provided that:

(1) The tribal government determines that the organization sponsoring the gaming operation is a charitable organization;

(2) All proceeds of the charitable gaming operation are for the benefit of the charitable organization;

(3) The TGRA permits the charitable organization to be exempt from this part;

(4) The charitable gaming operation is operated wholly by the charitable organization's employees or volunteers; and

(5) The annual gross gaming revenue of the charitable gaming operation does not exceed \$1,000,000.

(~~fg~~) *Testing laboratories.*

(1) A testing laboratory may provide the examination, testing, evaluating and reporting functions required by this section provided that:

(i) It demonstrates its integrity, independence and financial stability to the TGRA.

(ii) It demonstrates its technical skill and capability to the TGRA.

(iii) If the testing laboratory is owned or operated by, or affiliated with, a tribe, it must be independent from the manufacturer and gaming operator for whom it is providing the testing, evaluating, and reporting functions required by this section.

(iv) The TGRA:

(A) Makes a suitability determination of the testing laboratory based upon standards no less stringent than those set out in §§ 533.6(b)(1)(ii) through (v) of this chapter and based upon no less information than that required by § 537.1 of this chapter, or

(B) Accepts, in its discretion, a determination of suitability for the testing laboratory made by any other gaming regulatory authority in the United States.

(v) After reviewing the suitability determination and the information provided by the testing laboratory, the TGRA determines that the testing laboratory is qualified to test and evaluate Class II gaming systems.

(2) The TGRA must:

(i) Maintain a record of all determinations made pursuant to paragraphs (f)(1)(iii) and (f)(1)(iv) of this section for a minimum of three years and must make the records available to the Commission upon request. The Commission will only make available for public review records or portions of records subject to release under the Freedom of Information Act, 5 U.S.C. 552; the Privacy Act of 1974, 5 U.S.C. 552a; or the Indian Gaming Regulatory Act, 25 U.S.C. 2716(a).

(ii) Place the testing laboratory under a continuing obligation to notify it of any adverse regulatory action in any jurisdiction where the testing laboratory conducts business.

(iii) Require the testing laboratory to provide notice of any material changes to the information provided to the TGRA.

**§ 547.6 What are the minimum technical standards for enrolling and enabling Class II gaming system components?**

(a) *General requirements.* Class II gaming systems must provide a method to:

- (1) Enroll and unenroll Class II gaming system components;
- (2) Enable and disable specific Class II gaming system components.

(b) *Specific requirements.* Class II gaming systems must:

(1) Ensure that only enrolled and enabled Class II gaming system components participate in gaming; and

(2) Ensure that the default condition for components shall be unenrolled and disabled.

**§ 547.7 What are the minimum technical hardware standards applicable to Class II gaming systems?**

(a) *Printed circuit boards.*

(1) Printed circuit boards that have the potential to affect the outcome or integrity of the game, and are specially manufactured or proprietary and not off-the-shelf, must display a unique identifier such as a part number and/or revision number, which must be updated to reflect new revisions or modifications of the board.

(2) Switches or jumpers on all circuit boards that have the potential to affect the outcome or integrity of any game, progressive award, financial instrument, cashless transaction, voucher transaction, or accounting records must be capable of being sealed.

(b) *Electrostatic discharge.* Class II gaming system components accessible to the public must be constructed so that they exhibit immunity to human body electrostatic discharges on areas exposed to contact. Static discharges of  $\pm 15$  kV for air discharges and  $\pm 7.5$  kV for contact discharges must not cause damage or inhibit operation or integrity of the Class II gaming system.

(c) *Physical enclosures.* Physical enclosures must be of a robust construction designed to resist determined illegal entry. All protuberances and attachments such as buttons, identification plates, and labels must be sufficiently robust to avoid unauthorized removal.

(d) *Player interface.* The player interface must be labeled with the serial number and date of manufacture and include a method or means to:

- (1) Display information to a player; and
- (2) Allow the player to interact with the Class II gaming system.

(e) *Account access components.* A Class II gaming system component that reads account access media must be located within a secure and locked area, cabinet, or housing that is of a robust construction designed to resist determined illegal entry and to protect internal components. In addition, the account access component:

- (1) Must be constructed so that physical tampering leaves evidence of such tampering; and
- (2) Must provide a method to enable the Class II gaming system to interpret and act upon valid or invalid input or error condition.

(f) *Financial instrument storage components.* Any Class II gaming system components that store financial instruments and that are not operated under the direct control of a gaming operation employee or agent must be located within a secure and locked area, cabinet, or housing that is of a robust construction designed to resist determined illegal entry and to protect internal components.

(g) *Financial instrument acceptors.*

(1) Any Class II gaming system components that handle financial instruments and that are not operated under the direct control of an agent must:

(i) Be located within a secure and locked area, cabinet, or housing that is of a robust construction designed to resist determined illegal entry and to protect internal components;

(ii) Be able to detect the entry of valid or invalid financial instruments and to provide a method to enable the Class II gaming system to interpret and act upon valid or invalid input or error condition; and

(iii) Be constructed to permit communication with the Class II gaming system of the accounting information required by § 547.9(a) and by applicable provisions of any Commission and TGRA regulations governing minimum internal control standards.

(2) Prior to completion of a valid financial instrument transaction by the Class II gaming system, no monetary amount related to that instrument may be available for play. For example, credits may not be available for play until currency or coupon inserted into an acceptor is secured in the storage component.

(3) The monetary amount related to all valid financial instrument transactions by the Class II gaming system must be recorded as required by § 547.9(a) and the applicable provisions of any Commission and TGRA regulations governing minimum internal control standards.

(h) *Financial instrument dispensers.*

(1) Any Class II gaming system components that dispense financial instruments and that are not operated under the direct control of a gaming operation employee or agent must:

(i) Be located within a secure, locked and tamper-evident area or in a locked cabinet or housing that is of a robust construction designed to resist determined illegal entry and to protect internal components;

(ii) Provide a method to enable the Class II gaming system to interpret and act upon valid or invalid input or error condition; and

(iii) Be constructed to permit communication with the Class II gaming system of the accounting information required by § 547.9(a) and by applicable provisions of any Commission and TGRA regulations governing minimum internal control standards.

(2) The monetary amount related to all valid financial instrument transactions by the Class II gaming system must be recorded as required by § 547.9(a), the applicable provisions of part 543 of this chapter, and any TGRA regulations governing minimum internal control standards.

(i) *Game Outcome Determination Components.* Any Class II gaming system logic components that affect the game outcome and that are not operated under the direct control of a gaming operation employee or agent must be located within a secure, locked and tamper-evident area or in a locked cabinet or housing that is of a robust construction designed to resist determined illegal entry and to protect internal components. DIP switches or jumpers that can affect the integrity of the Class II gaming system must be capable of being sealed by the TGRA.

(j) *Door access detection.* All components of the Class II gaming system that are locked in order to meet the requirements of this part must include a sensor or other methods to monitor an open door. A door open sensor, and its components or cables, must be secure against attempts to disable them or interfere with their normal mode of operation;

(k) *Separation of functions/no limitations on technology.* Nothing herein prohibits the account access component, financial instrument storage component, financial instrument acceptor, and financial instrument dispenser from being included within the same component, or being separated into individual components.

**§ 547.8 What are the minimum technical software standards applicable to Class II gaming systems?**

(a) *Player interface displays.*

(1) If not otherwise provided to the player, the player interface must display the following:

- (i) The purchase or wager amount;
- (ii) Game results; and
- (iii) Any player credit balance.

(2) Between plays of any game and until the start of the next play, or until the player selects a new game option such as purchase or wager amount or card selection, whichever is earlier, if not otherwise provided to the player, the player interface must display:

- (i) The total purchase or wager amount and all prizes and total credits won for the last game played;
  - (ii) The final results for the last game played; and
  - (iii) Any default purchase or wager amount for the next play.
- (b) *Game initiation and play.*

(1) Each game played on the Class II gaming system must follow and not deviate from a constant set of rules for each game provided to players pursuant to § 547.16. ~~There must be no automatic or undisclosed~~ Undisclosed changes of rules are prohibited.

TGWG Notes as of 6/26: It seems that we are interpreting the use of “automatic or” differently than NIGC and recommend a change that makes it clear that no “undisclosed” change is ever allowed. Our concern is that the use of the word “automatic” could limit technology implementation and that may not be the intent of this standard. As long as the rules of the game are fully disclosed to the player, how the player and game transition through the play of the game and its rules should not be hindered by the elimination of “automatic” transitions or technology use.

(2) The Class II gaming system may not alter or allow to be altered the card permutations used for play of a Class II game unless specifically chosen by the player prior to commitment to participate in the game. No duplicate cards may be sold for any common draw.

(3) No game play may commence and, no financial instrument or credit may be accepted on the affected player interface, in the presence of any fault condition that affects the outcome of the game, open door, or while in test, audit, or lock-up mode.

(4) ~~No game play may commence unless initiated by a player~~ The player must initiate their participation in the play of a game.

TGWG Notes as of 6/26: The original language in the existing standards is much more clear in representing the intent that a player “must choose to participate in a game”. Was it the intent of the

NIGC to change the intent of this standard? Using the phrase “no game play may commence unless initiated by a player” could unintentionally change the intent of the standard.

(c) *Audit Mode.*

(1) If an audit mode is provided, the Class II gaming system must provide, for those components actively involved in the audit:

(i) All accounting functions required by § 547.9, by applicable provisions of any Commission regulations governing minimum internal control standards, and by any internal controls adopted by the tribe or TGRA;

(ii) Display player interface identification; and

(iii) Display software version or game identification;

(2) Audit mode must be accessible by a secure method such as an agent PIN, key, or other auditable access control.

(3) Accounting function data must be accessible by an agent at any time, except during a payout, during a handpay, or during play.

(4) The Class II gaming system must disable financial instrument acceptance on the affected player interface while in audit mode, except during financial instrument acceptance testing.

(d) *Last game recall.* The last game recall function must:

(1) Be retrievable at all times, other than when the recall component is involved in the play of a game, upon the operation of an external key-switch, entry of an audit card, or a similar method;

(2) Display the results of recalled games as originally displayed or in text representation so as to enable the TGRA or operator to clearly identify the sequences and results that occurred;

(3) Allow the Class II gaming system component providing game recall, upon return to normal game play mode, to restore any affected display to the positions, forms and values displayed before access to the game recall information; and

(4) Provide the following information for the current and previous four games played and must display:

(i) Play start time, end time, and date;

- (ii) The total number of credits at the start of play;
- (iii) The purchase or wager amount;
- (iv) The total number of credits at the end of play;
- (v) The total number of credits won as a result of the game recalled, and the value in dollars and cents for progressive prizes, if different;
- (vi) For bingo games and games similar to bingo, also display:
  - (A) The card(s) used by the player;
  - (B) The identifier of the bingo game played;
  - (C) The numbers or other designations drawn, in the order that they were drawn;
  - (D) The numbers or other designations and prize patterns covered on each card;
  - (E) All prizes won by the player, including winning patterns, if any; and
  - (F) The unique identifier of the card on which prizes were won;
- (vii) For pull-tab games only, also display:
  - (A) The result(s) of each pull-tab, displayed in the same pattern as on the tangible pull-tab;
  - (B) All prizes won by the player;
  - (C) The unique identifier of each pull tab; and
  - (D) Any other information necessary to fully reconstruct the current and four previous plays.
- (e) *Voucher and credit transfer recall.* Notwithstanding the requirements of any other section in this part, a Class II gaming system must have the capacity to:
  - (1) Display the information specified in § 547.11(b)(5)(ii) through (vi) for the last five vouchers or coupons printed and the last five vouchers or coupons accepted; and
  - (2) Display a complete transaction history for the last five cashless transactions made and the last five cashless transactions accepted.
- (f) *Software signature verification.* The manufacturer or developer of the Class II gaming system must provide to the testing laboratory and to the TGRA an industry-standard methodology, acceptable to the TGRA, for verifying the Class II gaming system game software. By way of illustration, for game

software stored on rewritable media, such methodologies include signature algorithms and hashing formulas such as SHA-1.

(g) *Test, diagnostic, and demonstration modes.* If test, diagnostic, and/or demonstration modes are provided, the Class II gaming system must, for those components actively involved in the test, diagnostic, or demonstration mode:

- (1) Clearly indicate when that component is in the test, diagnostic, or demonstration mode;
- (2) Not alter financial data on that component other than temporary data;
- (3) Only be available after entering a specific mode;
- (4) Disable credit acceptance and payment unless credit acceptance or payment is being tested; and
- (5) Terminate all mode-specific functions upon exiting a mode.

(h) *Multigame.* If multiple games are offered for player selection at the player interface, the player interface must:

- (1) Provide a display of available games;
- (2) Provide the means of selecting among them;
- (3) Display the full amount of the player's credit balance;
- (4) Identify the game selected or being played; and
- (5) Not force the play of a game after its selection.

(i) *Program interruption and resumption.* The Class II gaming system software must be designed so that upon resumption following any interruption, the system:

- (1) Is able to return to a known state;
- (2) Must check for any fault condition;
- (3) Must verify the integrity of data stored in critical memory;
- (4) Must return the purchase or wager amount to the player in accordance with the rules of the game;

and

- (5) Must detect any change or corruption in the Class II gaming system software.

(j) *Class II gaming system components acting as progressive controllers.* This paragraph applies to progressive controllers and components acting as progressive controllers in Class II gaming systems.

(1) Modification of progressive parameters must be conducted in a secure manner approved by the TGRA. Such parameters may include:

- (i) Increment value;
- (ii) Secondary pool increment(s);
- (iii) Reset amount(s);
- (iv) Maximum value(s); and
- (v) Identity of participating player interfaces.

(2) The Class II gaming system component or other progressive controller must provide a means of creating a progressive balancing report for each progressive link it controls. At a minimum, that report must provide balancing of the changes of the progressive amount, including progressive prizes won, for all participating player interfaces versus current progressive amount(s), plus progressive prizes. In addition, the report must account for, and not be made inaccurate by, unusual events such as:

- (i) Class II gaming system critical memory clears;
  - (ii) Modification, alteration, or deletion of progressive prizes;
  - (iii) Offline equipment; or
  - (iv) Multiple site progressive prizes.
- (k) *Critical memory.*

(1) Critical memory may be located anywhere within the Class II gaming system. Critical memory is any memory that maintains any of the following data:

- (i) Accounting data;
- (ii) Current credits;
- (iii) Configuration data;
- (iv) Last game play recall information required by § 547.8(d);
- (v) Game play recall information for the current game play, if incomplete;

- (vi) Software state (the last normal state software was in before interruption);
- (vii) RNG seed(s), if necessary for maintaining integrity;
- (viii) Encryption keys, if necessary for maintaining integrity;
- (ix) Progressive prize parameters and current values;
- (x) The five most recent financial instruments accepted by type, excluding coins and tokens;
- (xi) The five most recent financial instruments dispensed by type, excluding coins and tokens; and
- (xii) The five most recent cashless transactions paid and the five most recent cashless transactions accepted.

(2) Critical memory must be maintained using a methodology that enables errors to be identified and acted upon. All accounting and recall functions must be verified as necessary to ensure their ongoing integrity.

(3) The validity of affected data stored in critical memory must be checked after each of the following events:

- (i) Every restart;
- (ii) Each attendant paid win;
- (iii) Each sensed door closure; and
- (iv) Every reconfiguration, download, or change of prize schedule or denomination requiring operator intervention or action.

(1) Secured access. Class II gaming systems that use a logon or other means of secured access must include a user account lockout after a predetermined number of consecutive failed attempts to access the Class II gaming system.

**§ 547.9 What are the minimum technical standards for Class II gaming system accounting functions?**

(a) *Required accounting data.* The following minimum accounting data, however named, must be maintained by the Class II gaming system.

(1) Amount In: The total value of all financial instruments and cashless transactions accepted by the Class II gaming system. Each type of financial instrument accepted by the Class II gaming system must be tracked independently per financial instrument acceptor, and as required by applicable requirements of TGRA regulations that meet or exceed the minimum internal control standards at 25 CFR part 543.

(2) Amount Out: The total value of all financial instruments and cashless transactions paid by the Class II gaming system, plus the total value of attendant pay. Each type of financial instrument paid by the Class II gaming system must be tracked independently per financial instrument dispenser, and as required by applicable requirements of TGRA regulations that meet or exceed the minimum internal control standards at 25 CFR part 543.

(b) *Accounting data storage.* If the Class II gaming system electronically maintains accounting data:

(1) Accounting data must be stored with at least eight decimal digits.

(2) Credit balances must have sufficient digits to accommodate the design of the game.

(3) Accounting data displayed to the player may be incremented or decremented using visual effects, but the internal storage of this data must be immediately updated in full.

(4) Accounting data must be updated upon the occurrence of the relevant accounting event.

(5) Modifications to accounting data must be recorded, including the identity of the person(s) making the modifications, and be reportable by the Class II gaming system.

(c) *Rollover.* Accounting data that rolls over to zero must not corrupt data.

(d) *Credit balance display and function.*

(1) Any credit balance maintained at the player interface must be prominently displayed at all times except:

(i) In audit, configuration, recall and test modes; or

(ii) Temporarily, during entertaining displays of game results.

(2) Progressive prizes may be added to the player's credit balance provided:

(i) The player credit balance is maintained in dollars and cents;

(ii) The progressive accounting data is incremented in number of credits; or

(iii) The prize in dollars and cents is converted to player credits or transferred to the player’s credit balance in a manner that does not mislead the player or cause accounting imbalances.

(3) If the player credit balance displays in credits, but the actual balance includes fractional credits, the Class II gaming system must display the fractional credit when the player credit balance drops below one credit.

**§ 547.10 What are the minimum standards for Class II gaming system critical events?**

(a) *Fault events.*

(1) The following are fault events that must be capable of being recorded by the Class II gaming system:

| Event                                   | Definition and action to be taken  |
|---|--|
| (i) Component fault .....               | Reported when a fault on a component is detected. When possible, this event message should indicate what the nature of the fault is.   |
| (ii) Financial storage component full   | Reported when a financial instrument acceptor or dispenser includes storage, and it becomes full. This event message must indicate what financial storage component is full.   |
| (iii) Financial output component empty. | Reported when a financial instrument dispenser is empty. The event message must indicate which financial output component is affected, and whether it is empty.  |
| (iv) Financial component fault .....    | Reported when an occurrence on a financial component results in a known fault state.   |
| (v) Critical memory error .....         | Some critical memory error has occurred. When a non-correctable critical memory error has occurred, the data on the Class II gaming system component can no longer be considered reliable. Accordingly, any game play on the affected component must cease immediately, and an appropriate message must be displayed, if possible. |
| (vi) Progressive communication fault.   | If applicable; when communications with a progressive controller component is in a known fault state.  |
| (vii) Program storage medium fault      | The software has failed its own internal security check or the medium itself has some fault. Any game play on the affected component must cease immediately, and an appropriate message must be displayed, if possible.  |

(2) The occurrence of any event identified in paragraph (a)(1) of this section must be recorded.

(3) Upon clearing any event identified in paragraph (a)(1) of this section, the Class II gaming system must:

(i) Record that the fault condition has been cleared;

(ii) Ensure the integrity of all related accounting data; and

(iii) In the case of a malfunction, return a player’s purchase or wager according to the rules of the game.

(b) *Door open/close events.*

(1) In addition to the requirements of paragraph (a)(1) of this section, the Class II gaming system must perform the following for any component affected by any sensed door open event:

- (i) Indicate that the state of a sensed door changes from closed to open or opened to closed;
- (ii) Disable all financial instrument acceptance, unless a test mode is entered;
- (iii) Disable game play on the affected player interface;
- (iv) Disable player inputs on the affected player interface, unless test mode is entered; and
- (v) Disable all financial instrument disbursement, unless a test mode is entered.

(2) The Class II gaming system may return the component to a ready to play state when all sensed doors are closed.

(c) *Non-fault events.* (1) The following non-fault events are to **be** acted upon as described below, if applicable:

| Event   | Definition and Action to be Taken  |
|---|--|
| (i) Player interface off during play ...                                | Indicates power has been lost during game play. This condition must be reported by the affected component(s).                                  |
| (ii) Player interface power on .....                                    | Indicates the player interface has been turned on. This condition must be reported by the affected component(s).                               |
| (iii) Financial instrument storage component container/stacker removed. | Indicates that a financial instrument storage container has been removed. The event message must indicate which storage container was removed. |

**§ 547.11 What are the minimum technical standards for money and credit handling?**

(a) *Credit acceptance, generally.*

(1) Upon any credit acceptance, the Class II gaming system must register the correct number of credits on the player’s credit balance.

(2) The Class II gaming system must reject financial instruments deemed invalid.

(b) *Credit redemption, generally.*

(1) For cashable credits on a player interface, players must be allowed to cash out and/or redeem those credits at the player interface except when that player interface is:

- (i) Involved in the play of a game;
- (ii) In audit mode, recall mode or any test mode;
- (iii) Detecting any sensed door open condition;

(iv) Updating the player credit balance or total win accounting data; or

(v) Displaying a fault condition that would prevent cash-out or credit redemption. In this case a fault indication must be displayed.

(2) For cashable credits not on a player interface, the player must be allowed to cash out and/or redeem those credits at any time.

(3) A Class II gaming system must not automatically pay an award subject to mandatory tax reporting or withholding.

(4) Credit redemption by voucher or coupon must conform to the following:

(i) A Class II gaming system may redeem credits by issuing a voucher or coupon when it communicates with a voucher system that validates the voucher or coupon.

(ii) A Class II gaming system that redeems credits by issuing vouchers and coupons must either:

(A) Maintain an electronic record of all information required by paragraphs (b)(5)(ii) through (vi) of this section; or

(B) Generate two identical copies of each voucher or coupon issued, one to be provided to the player and the other to be retained within the electronic player interface for audit purposes.

(5) Valid vouchers and coupons from a voucher system must contain the following:

(i) Gaming operation name and location;

(ii) The identification number of the Class II gaming system component or the player interface number, as applicable;

(iii) Date and time of issuance;

(iv) Alpha and numeric dollar amount;

(v) A sequence number;

(vi) A validation number that:

(A) Is produced by a means specifically designed to prevent repetition of validation numbers; and

(B) Has some form of checkcode or other form of information redundancy to prevent prediction of subsequent validation numbers without knowledge of the checkcode algorithm and parameters;

(vii) For machine-readable vouchers and coupons, a bar code or other form of machine readable representation of the validation number, which must have enough redundancy and error checking to ensure that 99.9% of all misreads are flagged as errors;

(viii) Transaction type or other method of differentiating voucher and coupon types; and

(ix) Expiration period or date.

(6) Transfers from an account may not exceed the balance of that account.

(7) For Class II gaming systems not using dollars and cents accounting and not having odd cents accounting, the Class II gaming system must reject any transfers from voucher payment systems or cashless systems that are not even multiples of the Class II gaming system denomination.

(8) Voucher redemption systems must include the ability to report redemptions per redemption location or user.

**§ 547.12 What are the minimum technical standards for downloading on a Class II gaming system?**

(a) *Downloads.*

(1) Downloads are an acceptable means of transporting approved content, including but not limited to software, files, data, and prize schedules.

(2) Downloads must use secure methodologies that will deliver the download data without alteration or modification, in accordance with § 547.15(a).

(3) Downloads conducted during operational periods must be performed in a manner that will not affect game play.

(4) Downloads must not affect the integrity of accounting data.

(5) The Class II gaming system must be capable of providing:

(i) The time and date of the initiation of the download;

(ii) The time and date of the completion of the download;

(iii) The Class II gaming system components to which software was downloaded;

(iv) The version(s) of download package and any software downloaded. Logging of the unique software signature will satisfy this requirement;

(v) The outcome of any software verification following the download (success or failure); and

(vi) The name and identification number, or other unique identifier, of any individual(s) conducting or scheduling a download.

(b) *Verifying downloads.* Downloaded software on a Class II gaming system must be capable of being verified by the Class II gaming system using a software signature verification method that meets the requirements of § 547.8(f).

### **§ 547.13 What are the minimum technical standards for program storage media?**

(a) *Removable program storage media.* All removable program storage media must maintain an internal checksum or signature of its contents. Verification of this checksum or signature is to be performed after every restart. If the verification fails, the affected Class II gaming system component(s) must lock up and enter a fault state.

(b) *Nonrewritable program storage media.*

(1) All EPROMs and Programmable Logic Devices that have erasure windows must be fitted with covers over their erasure windows.

(2) All unused areas of EPROMs must be written with the inverse of the erased state (zero bits (00 hex) for most EPROMs), random data, or repeats of the program data.

(3) Flash memory storage components intended to have the same logical function as ROM, must be write-protected or otherwise protected from unauthorized modification.

(4) The write cycle must be closed or finished for all CD-ROMs such that it is not possible to write any further data to the CD.

(5) Write protected hard disks are permitted if the hardware means of enabling the write protect is easily viewable and can be sealed in place. Write protected hard disks are permitted using software write protection verifiable by a testing laboratory.

(c) *Writable and rewritable program storage media.*

(1) Writable and rewritable program storage, such as hard disk drives, Flash memory, writable CD-ROMs, and writable DVDs, may be used provided that the software stored thereon may be verified using the mechanism provided pursuant to § 547.8(f).

(2) Program storage must be structured so there is a verifiable separation of fixed data (such as program, fixed parameters, DLLs) and variable data.

(d) *Identification of program storage media.* All program storage media that is not rewritable in circuit, (EPROM, CD-ROM) must be uniquely identified, displaying:

(1) Manufacturer;

(2) Program identifier;

(3) Program version number(s); and

(4) Location information, if critical (socket position 3 on the printed circuit board).

**§ 547.14 What are the minimum technical standards for electronic random number generation?**

(a) *Properties.* All RNGs must produce output having the following properties:

(1) Statistical randomness;

(2) Unpredictability; and

(3) Non-repeatability.

(b) *Statistical Randomness.*

(1) Numbers or other designations produced by an RNG must be statistically random individually and in the permutations and combinations used in the application under the rules of the game. For example, if a bingo game with 75 objects with numbers or other designations has a progressive winning pattern of the five numbers or other designations on the bottom of the card and the winning of this prize is defined to be the five numbers or other designations that are matched in the first five objects drawn, the likelihood of each of the 75C5 combinations are to be verified to be statistically equal.

(2) Numbers or other designations produced by an RNG must pass the statistical tests for randomness to a 99% confidence level.

(i) Mandatory statistical tests for randomness include:

- (A) Chi-square test;
- (B) Runs test (patterns of occurrences must not be recurrent); and
- (C) Serial correlation test potency and degree of serial correlation (outcomes must be independent from the previous game).

(ii) Where applicable statistical tests for randomness may include:

- (A) Equi-distribution (frequency) test;
- (B) Gap test;
- (C) Poker test;
- (D) Coupon collector's test;
- (E) Permutation test;
- (F) Spectral test; or
- (G) Test on subsequences.

(c) *Unpredictability.*

(1) It must not be feasible to predict future outputs of an RNG, even if the algorithm and the past sequence of outputs are known.

(2) Unpredictability must be ensured by reseeding or by continuously cycling the RNG, and by providing a sufficient number of RNG states for the applications supported.

(3) Re-seeding may be used where the re-seeding input is at least as statistically random as, and independent of, the output of the RNG being re-seeded.

(d) *Non-repeatability.* The RNG may not be initialized to reproduce the same output stream that it has produced before, nor may any two instances of an RNG produce the same stream as each other. This property must be ensured by initial seeding that comes from:

- (1) A source of "true" randomness, such as a hardware random noise generator; or
- (2) A combination of timestamps, parameters unique to a Class II gaming system, previous RNG outputs, or other, similar method.

(e) *General requirements.*

(1) Software that calls an RNG to derive game outcome events must immediately use the output returned in accordance with the game rules.

(2) The use of multiple RNGs is permitted as long as they operate in accordance with this section.

(3) RNG outputs must not be arbitrarily discarded or selected.

(4) Where a sequence of outputs is required, the whole of the sequence in the order generated must be used in accordance with the game rules.

(5) The Class II gaming system must neither adjust the RNG process or game outcomes based on the history of prizes obtained in previous games nor use any reflexive software or secondary decision that affects the results shown to the player or game outcome.

TGWG Notes as of 6/26: During consultation in San Diego NIGC conveyed to TGWG members that there was also a concern about “awarding a prize that the player was not otherwise entitled based on the random outcome” and TGWG is concerned that once the game is over and the outcome announced that any subsequent actions by the operator are considered promotional giveaway and/or goodwill gestures and not considered “secondary decisions”.

(f) *Scaling algorithms and scaled numbers.* An RNG that provides output scaled to given ranges must:

(1) Be independent and uniform over the range;

(2) Provide numbers scaled to the ranges required by game rules, and notwithstanding the requirements of paragraph (e)(3) of this section, may discard numbers that do not map uniformly onto the required range but must use the first number in sequence that does map correctly to the range;

(3) Be capable of producing every possible outcome of a game according to its rules; and

(4) Use an unbiased algorithm and ~~any~~ bias must be reported to the TGRA.

TGWG Notes as of 6/26: We recommend the standard be changed to reflect the expectations as described in bulletin 2008-4 and remove the word “any”.

**§ 547.15 What are the minimum technical standards for electronic data communications between system components?**

(a) *Sensitive data.* Communication of sensitive data must be secure from eavesdropping, access, tampering, intrusion or alteration unauthorized by the TGRA. Sensitive data includes, but is not limited to:

- (1) RNG seeds and outcomes;
- (2) Encryption keys, where the implementation chosen requires transmission of keys;
- (3) PINs;
- (4) Passwords;
- (5) Financial instrument transactions;
- (6) Transfers of funds;
- (7) Player tracking information;
- (8) Download Packages; and
- (9) Any information that affects game outcome.

(b) *Wireless communications.*

(1) Wireless access points must not be accessible to the general public.

(2) Open or unsecured wireless communications are prohibited.

(3) Wireless communications must be secured using a methodology that makes eavesdropping, access, tampering, intrusion or alteration impractical. By way of illustration, such methodologies include encryption, frequency hopping, and code division multiplex access (as in cell phone technology).

(c) Methodologies must be used that will ensure the reliable transfer of data and provide a reasonable ability to detect and act upon any corruption of the data.

(d) Class II gaming systems must record detectable, unauthorized access or intrusion attempts.

(e) Remote communications must only be allowed ~~if~~as authorized by the TGRA. Class II gaming systems must have the ability to enable or disable remote access, and the default state must be set to disabled.

(f) Failure of data communications must not affect the integrity of critical memory.

(g) The Class II gaming system must log the establishment, loss, and re-establishment of data communications between sensitive Class II gaming system components.

**§ 547.16 What are the minimum standards for game artwork, glass, and rules?**

(a) *Rules, instructions, and prize schedules, generally.* The following must at all times be displayed or made readily available to the player upon request:

(1) Game name, rules, and options such as the purchase or wager amount stated clearly and unambiguously;

(2) Denomination;

(3) Instructions for play on, and use of, the player interface, including the functions of all buttons; and

(4) A prize schedule or other explanation, sufficient to allow a player to determine the correctness of all prizes awarded, including;

(i) The range and values obtainable for any variable prize;

(ii) Whether the value of a prize depends on the purchase or wager amount; and

(iii) The means of division of any pari-mutuel prizes; but

(iv) For Class II Gaming Systems, the prize schedule or other explanation need not state that subsets of winning patterns are not awarded as additional prizes (for example, five in a row does not also pay three in a row or four in a row), unless there are exceptions, which must be clearly stated.

(b) *Disclaimers.* The Player Interface must continually display or until acknowledged by the player:

TGWG Notes as of 6/26: The concern is that if you have to display all of the disclaimers on a small hand-held this requirement could unintentionally eliminate certain technologies. It should be adequate that the Class II gaming system display the information. Allowing the disclaimers to be display until they are acknowledged by the player allows for the game to be presented on an interface device that is not provided by the manufacturer or operator such as a cellular phone.

The recommended addition of the phrase "...or until acknowledged by the player" supports Class II gaming system player interfaces having the same level of functionality that is common in today's games and other modern devices. For example; when a person uses a new application on an iPad they often have to read and accept rules and terms but it is not required that they be continually displayed, although they are often readily available by selecting an option to display the information.

(1) "Malfunctions void all prizes and plays" or equivalent; and

(2) "Actual Prizes Determined by Bingo [or other applicable Class II game] Play. Other Displays for Entertainment Only." or equivalent.

(c) *Odds notification.* If the odds of winning any advertised top prize exceeds 100 million to one, the Player Interface must display “Odds of winning the advertised top prize exceeds 100 million to one” or equivalent.

**§ 547.17 How does a TGRA apply to implement an alternate standard to those required by this part?**

(a) *TGRA approval.*

(1) A TGRA may approve an alternate standard from those required by this part if it has determined that the alternate standard will achieve a level of security and integrity sufficient to accomplish the purpose of the standard it is to replace.

(2) For each enumerated standard for which the TGRA approves a an alternate standard, it must submit to the Chair within 30 days, a detailed report, which must include the following:

(i) An explanation of how the alternate standard achieves a level of security and integrity sufficient to accomplish the purpose of the standard it is to replace; and

(ii) The alternate standard as approved and the record on which the approval is based.

TGWG Notes as of 6/26: What is the difference between (i) and (ii)? Our original recommendation to remove the phrase “...and the record on which it is based” is because we thought that was covered in (i).

(3) In the event that the TGRA or the tribe’s government chooses to submit an alternate standard request directly to the Chair for joint government to government review, the TGRA or tribal government may do so without the approval requirement set forth in paragraph (a) (1) of this section.

(b) *Chair Review.*

(1) The Chair may approve or object to an alternate standard granted by a TGRA.

(2) Any objection by the Chair must be in written form with an explanation why the alternate standard as approved by the TGRA does not provide a level of security or integrity sufficient to accomplish the purpose of the standard it is to replace.

(3) If the Chair fails to approve or object in writing within 60 days after the date of receipt of a complete submission, the alternate standard is considered approved by the Chair. The Chair may, upon notification to the TGRA, extend this deadline an additional 60 days.

(4) No alternate standard may be implemented until it has been approved by the TGRA pursuant to paragraph (a)(1) of this section or the Chair has approved pursuant to paragraph (b)(1) of this section.

(c) *Appeal of Chair decision.* A Chair's decision may be appealed pursuant to 25 CFR subchapter H.

Dated this 22<sup>nd</sup> of May 2012.