

Rule 150 Report
Alice Gran and David Lacey

1 Introduction

- 1.1 The minutes of the General Council Meeting of 1 March 2014 record the following resolution:

"The General Council is concerned with the manner in which the NRA may have dealt with Rule 150 in connection with the British Proof Authority Memorandum of June 1999. The General Council appeals to the Council, along with its advisory body in these matters, the Shooting Committee, to deal promptly with the matter having taken into consideration the wealth of information and advice available to it."

- 1.2 Council appointed two of its members, Alice Gran and David Lacey, to conduct an inquiry in response to this resolution.

- 1.3 The terms of reference of the Inquiry were:

"to review the manner in which the NRA has dealt with Rule 150 in connection with the British Proof Authority Memorandum of June 1999"

- 1.4 This Report sets out the result of the Inquiry.

2 Protocols of the Inquiry

- 2.1 The Inquiry operated on the following principles:

- (a) all information (written or oral) provided to the Inquiry is deemed to be in the public domain, for disclosure at the discretion of the Inquiry;
- (b) interviews were not tape-recorded;
- (c) notes of the Inquiry will not be made available to any person;
- (d) any person quoted in the Report or in respect of whom the Inquiry made a finding or a recommendation would be given 21 days to review that part of the Report in draft solely to correct any factual errors. No such person is named or quoted in this Report; and
- (e) the Inquiry interviewed such persons and reviewed such documentation in addition to documents submitted by interviewees as it deemed necessary.

- 2.2 The Inquiry notes that the NRA has obtained the opinion of Nicholas Doherty, a barrister with significant expertise in firearms matters (the "Opinion") in which Mr Doherty confirms that:

- (a) the NRA has not committed an offence under the Proof Acts, or acted in breach of the Convention or is in breach of the duty it owes to its members by:
 - (i) implementing Rule 150 with an additional concession that is not referred to in the Memorandum; or
 - (ii) allowing the use in competitions of rifles with reduced chamber dimensions as described in Rule 150; and
- (b) a person does not commit any offence under the Proof Acts if he submits for proof-testing pursuant to the Memorandum a firearm with non-standard

dimensions and fails to certify the specific non-standard dimensions required to be certified to the Proof House under the Memorandum.

- 2.3 The Inquiry expresses no view on legal matters, and refers readers to the opinion of Nicholas Doherty in relation to Rule 150 referred to above.
- 2.4 The Inquiry expresses no view on the safety of Rule 150, and refers readers to the interim 2016 report of the British Proof Authority on the effect of reduced chamber dimensions.

3 Methodology

- 3.1 The Inquiry reviewed all documents made available to it, consulted such other documents as it deemed appropriate and interviewed the following people:
 - (a) John Bloomfield;
 - (b) Ian Brown;
 - (c) John Carmichael;
 - (d) Peter Hobson;
 - (e) John Kynoch;
 - (f) Robin Pizer;
 - (g) Iain Robertson; and
 - (h) John Webster.
- 3.2 The interviews were all conducted in random order in person or by telephone with both members of the Inquiry together.
- 3.3 A draft of this Report was provided to Council and we received various comments from members of Council as to factual matters.
- 3.4 The Inquiry would like to record its thanks to all those who provided information to the Inquiry.

4 What is Rule 150?

- 4.1 The British Proof Authority administers a system of proof for firearms as set out in The Gun Barrel Proof Act of 1868 as amended and supplemented by the Gun Barrel Proof Acts of 1950 and 1978 (the "**Proof Acts**"). Various rules and regulations have been made pursuant to the Proof Acts and the current ones are the Rules, Regulations and Scales Applicable to the Proof of Small Arms 2006 (the "**Rules of Proof**").
- 4.2 The Commission Internationale Permanente pour l'Epreuve des Armes à Feu Portatives ("**CIP**") is an international organisation that administers the convention for the reciprocal recognition of proof marks on small arms 1971/11325 (the "**Convention**"). CIP publishes minimum chamber and maximum cartridge measurements for various cartridges. The United Kingdom became a signatory to the Convention in 1980. The Convention is an agreement between Governments for reciprocal recognition of proof marks.
- 4.3 In 1999, following the conclusion in 1998 of various pressure tests conducted by the Birmingham Proof House and other interested parties in relation to the use of certain dimensions in a .308 Winchester chamber that were smaller than the CIP standard, the British Proof Authority published a memorandum (the "**Memorandum**") stating

that it would accept .308 Winchester rifles for proof with dimensions below those specified by CIP as follows (quoted only in part):

*"The minimum acceptable dimensions are:-
G1- Throat = 0.3085 ...
F- Bore = 0.298 ...
Z- Groove = 0.3065..."*

These smaller dimensions than permitted by the CIP will be acceptable to the British Proof Authority on the following basis:

- 1) *Certification in writing to the proof house confirming the actual dimensions of G1, F & Z on submission for proof.*
- 2) *The barrel will be marked .308 Win Non Standard as will the dimensions not complying with the CIP minimum, e.g. G1 = 0.3085, F=0.298 & Z = 0.3065.*
- 3) *A mandatory Proof Certificate will be issued that will show the calibre as .308 win Non Standard, the dimensions not complying with the CIP minimum, and the statement 'Only CIP approved .308 Win ammunition producing a maximum average pressure (Pt-max) of 3650 bar (CIP Radial Method) should be fired in this barrel.'"*

4.4 Rule 150 sets out certain requirements for rifles used in a Target Rifle competition with ammunition issued by the NRA. Schedule 1 shows the various changes made to Rule 150 since 2000.

4.5 The relevant part of the Rule currently reads as follows:

"Bore and Chamber Dimensions: The dimensions must be not less than either CIP or SAAMI minimum chamber drawings (whichever is the smaller) other than [for 7.62x51 and .308 Winchester] where the following concessions are permitted:

- [(a)] the bore diameter must be not less than 0.298"*
- [(b)] the groove diameter must be not less than 0.3065"*
- [(c)] the throat diameter must not be less than either the bullet diameter or 0.3085", whichever is the greater*
- [(d)] the minimum throat length may also be reduced but only to such extent that the bullet of the cartridge in use is not in contact with the rifling.*

If reduced bore or groove diameters as above are used, only ammunition developing an average max pressure less than 3650 Bar under CIP test conditions may be used. NRA ammunition "as issued" will satisfy this limit"

4.6 In relation to the wording of Rule 150 we note:

- 4.6.1 paragraphs (a) – (c) of Rule 150 reflect the concessions stated in the Memorandum;
- 4.6.2 paragraph (d) is described as an additional concession not referred to in the Memorandum and is referred to in this Report as the "no contact" test. It refers to the "bullet of the cartridge" and we have assumed this is intended to refer to a bullet in a case loaded to a maximum cartridge overall length of the CIP specification of 2.800". We note that a competitor could not know in

advance if his rifle would pass this test without knowing the bullet to be used (and hence the shape of the ogive) or the overall cartridge length (so as to be able to calculate the distance from the base of the cartridge to the point on the ogive that contacts the rifling); and

- 4.6.3 the final paragraph quoted is a warning to users of rifles that take advantage of these concessions to use only reduced pressure ammunition (as required by the Memorandum) and confirms that NRA-issued ammunition will be within this pressure limit.
- 4.7 We note that a rifle does not need to have been presented for proof in order to be used at Bisley and Rule 150 applies whether or not a rifle has been presented for proof.

5 The NRA

- 5.1 We understand that the NRA test for "compliance" with Rule 150 has taken various forms over the years. A dummy cartridge was available in the past, at other times a tool was used to check whether a bullet used in the issued ammunition when loaded in a .308 Winchester case to an overall length of 2.800" contacted the rifling. Currently a tool is used with a bullet of the type in the issued ammunition to determine whether a cartridge loaded to an overall length of 2.800" does touch the rifling. If it would, the rifle fails the test.
- 5.2 If a rifle passes the test described in para 5.1, a coloured sticker issued by the NRA is affixed to the rifle by NRA Staff or a gunsmith authorised to do so by the NRA. Allowing gunsmiths to carry out this test reduces the number of rifles that need to be tested on shooting days and has obvious practical benefit.
- 5.3 Each sticker is serial-numbered and the NRA circulated a memorandum in 2005 with instructions on how the sticker should be affixed and the records to be kept. The sticker must be attached only to the barrel of the rifle.
- 5.4 The test conducted by the NRA is therefore limited to whether the rifle passes the "no-contact" test. The NRA does not check compliance with the other requirements of Rule 150. We understand that to do so would require invasive tests using specialist tools. It is therefore unhelpful (and misleading) to describe a rifle that meets the "no-contact" test as being "Rule 150-compliant".
- 5.5 A rifle that has been declared to the Proof Authorities as having reduced dimensions in line with Rule 150 should be marked accordingly by the Proof Authorities but we note that a rifle may have been presented for proof without a declaration that some dimensions are below CIP-standard or the rifle may not have been proved.

6 The Issues

Various issues have been raised in relation to Rule 150 during the Inquiry. A number of these could be characterised as being outside the remit of the Inquiry, but we have set out below our views on them given the importance of this matter.

- 6.1 *The NRA does not check that all rifles comply with Rule 150, or carry out random sampling in an organised way*
- (a) The NRA has not regularly checked whether rifles used in competitions comply with all the requirements of Rule 150. Testing has been limited in most cases to "no-contact" testing, conducted in various ways.
- (b) We note that prior to 2007 there were only two tests applicable to Rule 150, while later revisions of the Rule introduced more aspects that could have been tested, but only by using invasive testing procedures.

- (c) There is obvious value in publishing an agreed testing methodology combined with proper record-keeping of the tests conducted and a recognition of the limits of the testing that is conducted. It would be reasonable for the NRA to put in place a means of checking compliance with the requirements of Rule 150 to the extent practicable to ensure no unfair competitive advantage is gained, while not assuming responsibility for the safety of that rifle. Transparency is important to avoid any impression that the NRA does not provide a level playing field for competitors.
- (d) We note that testing for the Imperial Meeting is authorised and conducted by the Shooting Committee and administered by the Secretary General.

6.2 *The NRA took no action against gunsmiths who affixed stickers to rifles that were found not to comply with Rule 150*

- (a) We received reports that gunsmiths had affixed stickers to rifles that subsequently failed the "non-contact" test, but that this was not pursued by the NRA. If a rifle has a sticker affixed to it but is not compliant, the person affixing that sticker should be required to explain the discrepancy. If he declines to do so or the NRA is not satisfied with the explanation, his authority to affix stickers should be suspended or revoked. This should be a condition of any authority granted to any person to test Rule 150 compliance.
- (b) The NRA can of course only take action if non-compliance is reported to it through an appropriate mechanism in a timely fashion and evidence of the non-compliance is preserved and made available to the NRA.

6.3 *The fourth concession listed in Rule 150 was not approved by the Proof House*

The Opinion confirms that no such approval was required.

6.4 *The fourth concession in Rule 150 is not referred to in the Memorandum*

The Opinion confirms that the NRA was not required to ensure that Rule 150 was in the same terms as the Memorandum as the two documents serve very different purposes. The Proof Authority does not regulate the NRA and its rules do not bind the NRA. Proof Authority rules only apply to the proofing of guns in the United Kingdom.

6.5 *The fourth concession in Rule 150 is illegal*

The Opinion confirms that this is not the case since there is no requirement for Rule 150 to reflect any requirement of the Proof House.

6.6 *The fourth concession in Rule 150 does not reflect standard handloading practice*

There is no "standard" handloading practice on this point. Some bullets have been found to perform better when loaded to touch the rifling, and there is no objection to this so long as pressure remains at a safe level. We note that the ammunition issued by the NRA is loaded to a pressure specified by the Proof House in the Memorandum, and that the Memorandum makes no reference to any "jump". In any case, Rule 150 does not involve handloading and all NRA-issued ammunition is manufactured to CIP dimensions and compliant with the Memorandum.

6.7 *The lack of rigour on the part of the NRA in checking compliance with Rule 150 has allowed persons to obtain an unfair advantage in competition*

Resolution of the issues around Rule 150 should not result in any challenges to any results of past competitions. So long as all competitors are subject in the

future to the same approved testing regime, any impression of unfair competitive advantage or cheating should be dispelled. We have not received any evidence that any competitor received an unfair advantage from the historic application of Rule 150. However, transparent and prompt action is important to avoid giving rise to a perception that persons can take advantage of the Rule in a way that may be perceived as unfair. The perception of fairness in competition can be equally as important as the reality.

6.8 *Rule 150 results in a risk to the safety of shooters*

- (a) Rule 150 applies only to rifles used in competitions shot under NRA rules with issued ammunition. The manufacturer of the issued ammunition is required to provide ammunition that is within the maximum pressure limit stated in the Memorandum. The Inquiry has not received any evidence that compliance with Rule 150 can lead to a safety issue with ammunition issued by the NRA. We refer readers to the 2016 report of the British Proof Authorities as to matters of safety.
- (b) The Memorandum states that ammunition to be used in rifles that are proved under the Memorandum should produce a lower average pressure under CIP test conditions so that when used in a Rule 150 chamber the pressure does not exceed 4150 bar. It is up to the user to make sure he is using ammunition appropriate for his rifle.
- (c) Range officers in competitions should work to standard operating procedures which include requirements to report range incidents. Those responsible for the conduct of competitions should keep in mind what issues are reportable and ensure that timely reports are made, together with supporting evidence.
- (d) There are various circumstances in which issues could arise, for example, where a rifle with Rule 150 dimensions is presented to the Proof House but the dimensions were not declared by the gunsmith as required. That rifle would bear a standard .308 Win proof mark but may not be suitable for use with all CIP-compliant ammunition. That would be an issue for the gunsmith and the owner of the rifle, not for the NRA.

6.9 *The NRA cannot amend Rule 150 without the consent of the Proof House*

The Opinion confirms that the NRA does not need the approval of the Proof House to change Rule 150, and the Proof House does not need the approval of the NRA to change the Rules of Proof.

6.10 *The NRA misled an ammunition manufacturer by stating that there would be a specified "jump" in rifles with which the ammunition would be used.*

We do not agree with this. The contract with ammunition manufacturers sets out various conditions for testing the ammunition including the requirement that the ammunition not exceed a lower average pressure. Included in those conditions is a requirement that the ammunition be tested in a chamber that provides a jump of .025". The conditions were set out solely for the purpose of determining whether the ammunition is made to CIP specifications, but meeting the lower pressure limits required by the Memorandum. The purpose was not to inform manufacturers that the ammunition would only be used in rifles with a .025" jump, but only that the accuracy and velocity tests would be conducted using a chamber with that specification.

7 History of Rule 150

7.1 The development of Rule 150 may be summarised as follows:

- 7.1.1 Prior to 2000 – the rifle must be "suitable for firing" the standard 7.62x51 NATO military cartridge;
- 7.1.2 2000-2006 - the rifle used must:
- (a) be "suitable for firing" the "standard 7.62x51mm NATO military cartridge" or "the 308 Winchester commercial cartridge". We note there was no requirement that the chamber dimensions or bore and groove diameters conformed to CIP or SAAMI specifications and understand that this was because many would not have conformed;
 - (b) have a throat dimension of the barrel not less than .3085 inches; and
 - (c) the length of the leed must be such that the 155 grain bullet of the standard 7.62 x 51mm Radway Green military cartridge, loaded to an overall cartridge length of 2.800 inches, is not in contact with the rifling.
- 7.1.3 2007-2008 – a requirement was introduced that "the chamber dimensions must be not less than either CIP or SAAMI minimum chamber drawings (whichever is the smaller)" other than in respect of the two exceptions that applied in 2000 as referred to in paragraphs (b) and (c) above.
- 7.1.4 2009 - the reference to the 7.62x51mm Radway Green cartridge was replaced with a reference to "the standard .308 Win commercial cartridge". We understand this change reflected the fact that the Ministry of Defence no longer supplied ammunition to the NRA for the Imperial meeting. We assume this was intended to refer to the ".308 Win commercial cartridge" purchased by the NRA for issue to competitors, given the wide range of .308 Win ammunition manufactured commercially.
- 7.1.5 2010 onwards - Rule 150 reflected all the concessions of the Memorandum.
- 7.2 There is little information in NRA records of the time explaining the rationale for these changes, but we received copies of personal correspondence on the matter.
- 7.3 The restrictions contained in Rule 150 were therefore introduced in stages:
- 7.3.1 2000 – the throat diameter and throat length were restricted, with all other dimensions being unrestricted (other than the general requirement that the rifle be suitable for firing the relevant cartridge);
 - 7.3.2 2007 - a requirement was introduced that the chamber dimensions must be not less than CIP specifications, other than throat diameter and throat length, which could be reduced in line with the Memorandum. Bore and groove diameters were not regulated; and
 - 7.3.3 2010 – restrictions on the bore and groove diameter were added in line with the Memorandum.
- 7.4 We understand the gradual changes to Rule 150 reflected the fact that there were many rifles in use that had been proved prior to the Memorandum coming into effect and to introduce all the restrictions would have dis-qualified many rifles from use.
- 7.5 We received a number of submissions on the fact that the overall length did not indicate whether or not the bullet would contact the rifling, as this test depended on the shape of the ogive of the bullet. We note that Rule 150 has not specified the bullet used in the ammunition since 2007 and not specified the overall length of the cartridge since 2010. If the bullet changes, then the shape of the ogive may change, with the result that the bullet might contact the rifling in a rifle that previously passed

this test. We endorse the practice of publishing this information in the Journal and the website so it is available to all competitors.

8 Conclusions

The Inquiry concludes as follows:

- 8.1 Lack of oversight - The Council, General Council and the Shooting Committee failed to record the nature and extent of the oversight of changes to Rule 150, giving rise to the impressions that insufficient oversight was exercised. It also failed to deal promptly and comprehensively with issues raised in relation to Rule 150 as indicated by the level of concern in General Council resulting in the resolution referred to in paragraph 1.1, our examination of the minutes of the Shooting Committee and the interviews we conducted. Prompt action would have done much to prevent the issue becoming such a long-running matter and consuming time and resources of the NRA. The expression "oversight" is used in this Report to mean that a particular action was discussed by the relevant group of people, with time allowed for deliberation and debate before the action was taken and that the results of that discussion were recorded in sufficient detail for people who were not at the meeting to understand the conclusions reached and the reasons for those conclusions. Disclosure is not the same as oversight and personal correspondence is not the same as proper records for Committees.
- 8.2 Description - The NRA does not test for compliance with all the elements of Rule 150. This can lead to confusion as to the scope and purpose of the testing.
- 8.3 Unfair advantage - There is no evidence that any competitor has obtained an unfair advantage in competition as a result of the way in which the NRA has addressed compliance with Rule 150 or of "cheating", by which we mean a dishonest attempt to gain a competitive advantage. However, the alleged lack of transparency and the alleged appearance of conflicts of interest have given rise to a perception of unfair advantage, which is not conducive to the proper conduct of competitions.
- 8.4 "No-contact" test - The "no-contact" test is open to criticism in that the overall length of the ammunition is measured from the head of the case to the meplat of the bullet, but the ogive of the bullet is the part that will come in contact with the rifling. Manufacturing tolerances in bullet dimensions may mean that one .308 Win round loaded to an overall length of 2.800" will result in contact with the rifling, while another will not. However, the manufacturer takes this into account to ensure the average ammunition length is less than the minimum chamber length by a sufficient margin that ogive variations should not be an issue. Also, the "no-contact" test is easy to administer, with an extremely small risk to the competitor's rifle and failures can generally be corrected relatively easily, for example, by cleaning or by removing a very small amount of metal.
- 8.5 No damage - Testing that involves potential damage to the competitor's rifle, the use of specialist equipment or the need for specialist skills is not appropriate.
- 8.6 Proof - There is obvious practical benefit to the shooting community if a rifle that meets the requirements of Rule 150 also meets the requirements for proof by the Proof Authorities. Otherwise, competitors who have no practical alternative to using a proofed rifle may be at a competitive disadvantage.
- 8.7 Nothing in this Report should be construed as suggesting that the NRA failed to comply with any requirements relating to safety or that any of the issues referred to in this Report affected safety. We direct readers to the 2016 report of the British Proof Authorities on these matters.

9 Recommendations

The Inquiry makes the following recommendations:

- 9.1 Conflict of interest – all members of Council, General Council and Committees must consider not only actual conflicts of interest but also circumstances that could give the appearance or suggestion of conflict of interest, such as being a competitor, ammunition supplier or a rifle maker. A conflict of interest or circumstance that could give rise to the appearance of a conflict of interest should be declared and minuted. We endorse the current practice of Council in this regard.
- 9.2 Sub-Committees – Any sub-committee formed by a Committee should keep adequate minutes of its meetings to record its conclusions or recommendations and those minutes should be reflected in the minutes of the relevant Committee as part of proper governance.
- 9.3 Minutes – significant decisions or conclusions of Committees should be minuted, along with the issues discussed in arriving at that decision or conclusion to provide a contemporaneous record. Personal correspondence is a convenient means for members to exchange views but should not be seen as a substitute for the minutes.
- 9.4 Scope of tests – the NRA should clarify that the only check that it currently carries out is in relation to the "no-contact" rule. It is misleading to describe a rifle that has passed the current NRA test as being "Rule-150 compliant": the rifle simply meets part of the requirements of Rule 150. The NRA may, of course, introduce tests for compliance with other aspects of Rule 150 if it wishes.
- 9.5 Bullet – the NRA should publish annually in the Journal and its website the specification of ammunition to be issued to competitors including the type of bullet that will be loaded in the ammunition and the overall length, so that the ogive shape and the length from base to ogive is known to all competitors. This will also avoid any suggestion that knowledge of the specification may give a person an unfair advantage
- 9.6 Stickers - The NRA should publish a procedure to be followed where a rifle bearing a sticker is alleged not to be compliant with the "no-contact test". Any such procedure should include the requirement that any such alleged failure must be referred to the Secretary General or his nominee for investigation and must not be corrected prior to the reporting and investigation of the alleged failure.
- 9.7 Reports - the Secretary General should provide an annual report to Council of the results of inspections in that year and actions taken in the case of any non-compliance. Council should provide a copy of that report to General Council.

Alice Gran & David Lacey

20 June 2016

Schedule 1

Text of Rule 150 marked to show changes

Prior to 2000

The rifle used must be "suitable for firing" the relevant cartridge.

2000

The throat dimensions of the barrel must be not less than .3085 inches. The length of the leed must be such that the 155 grain bullet of the standard 7.62 x 51mm Radway Green military cartridge, loaded to an overall cartridge length of 2.800 inches, is not in contact with the rifling.

2001- 2006

In (a) and (b) above the throat dimensions of the barrel must be not less than .3085 inches. The length of the leed must be such that the 155 grain bullet of the standard 7.62 x 51mm Radway Green military cartridge, loaded to an overall cartridge length of 2.800 inches, is not in contact with the rifling.

2007-2008

In (a) and (b) above the chamber dimensions must be not less than either CIP or SAAMI minimum chamber drawings (whichever is the smaller) other than the following two exceptions:

- *the throat dimensions of the barrel must be not less than .3085 inches*
- *The length of the leed the minimum throat length may be reduced but must be such that the 155 grain bullet of the standard 7.62 x 51mm Radway Green military cartridge, loaded to an overall cartridge length of 2.800 inches, is not in contact with the rifling.*

2009

In (a) and (b) above the chamber dimensions must be not less than either CIP or SAAMI minimum chamber drawings (whichever is the smaller) other than the following two exceptions:

- *the throat diameter of the barrel must be not less than 0.3085 inches*
- *the minimum throat length may be reduced but must be such that the 155 grain bullet of the standard ~~7.62 x 51mm Radway Green military~~ .308 Win commercial cartridge, loaded to an overall cartridge length of 2.800 inches, is not in contact with the rifling.*

2010-2015

In (a) and (b) above The chamber dimensions must be not less than either CIP or SAAMI minimum chamber drawings (whichever is the smaller) other than (a) and (b) above other than the following two exceptions where the following concessions are permitted:

the bore diameter must be not less than 0.298"

the groove diameter must be not less than 0.3065"

the throat diameter of the barrel must be not less than either the bullet diameter or 0.3085", whichever is the greater

the minimum throat length may also be reduced but ~~must be such that the 155-grain bullet of the standard .308 Win commercial cartridge, loaded to an overall length of 2.800 inches~~ only to such extent that the bullet of the cartridge in use is not in contact with the rifling.

If reduced bore or groove diameters as above are used only ammunition developing an average max pressure less than 3650 Bar under CIP test conditions may be used. NRA ammunition "as issued" will satisfy this limit.