



NATIONAL NUCLEAR REGULATOR

For the protection of persons, property and the environment
against nuclear damage

REGULATORY GUIDE

Training and Recognition of Appointed Medical Practitioners

RG-0013

Rev 0

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1) Inputs have been received from external parties

Rev No.	Supersedes	Date approved
0	LG-1016 "Guide to the requirements for Medical Surveillance and Control of Nuclear Installation Personnel and Persons engaged in Activities involving Nuclear- Hazard material" as it relates to training and registration of Appointed Medical Practitioners	2 May 1991
1	LG-1017, "A Guide to the Requirements for Appointed Medical Practitioners"	19 November 2011
2	RD-011 "Requirements for Medical Surveillance and Control of persons occupationally exposed to radiation: Mining and Minerals Processing" as it relates to training and registration of Appointed Medical Practitioners	26 April 2002

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1 INTRODUCTION

The IAEA GSR Part 3 requires that the government shall ensure that requirements are established for education, training, qualification and competence in protection and safety of all persons engaged in activities relevant to protection and safety as well as the formal recognition of qualified experts.

It also requires that the government shall ensure that arrangements are in place for the provision of the education and training services required for building and maintaining the competence of persons and organizations that have responsibilities relating to protection and safety. GSR Part 3 makes provision for the competence of persons to be assessed by the State by having a formal mechanism for registration, accreditation or certification of radiological medical practitioners in the given specialty (e.g. radiology, radiation therapy, nuclear medicine, dentistry, cardiology, etc.).

Requirements and arrangements need to be established to assess the education, training, and recognition of any individual proposed by the authorisation holder to be employed as an appointed medical practitioner and to decide whether such an individual can undertake the associated functions within the required speciality.

2 PURPOSE

The purpose of this Regulatory Guidance (RG) is two-fold, namely

- to provide for improved implementation of GSR Part 3 and legislative provisions related to the education, training and recognition of Appointed Medical Practitioner (AMP) responsible for medical surveillance at regulated entities;
- to facilitate the harmonisation of the education, training and recognition of AMP's among the regulated entities, superseding relevant guidance provided in [9], [11] and [12].

3 SCOPE

This Regulatory Guide contains guidance on harmonising the minimum education, training, and recognition requirements for AMP's within the existing legislative framework and is applicable to all holders or applicants of nuclear authorisations.

4 TERMS, DEFINITIONS AND ABBREVIATIONS

4.1 Terms and Definitions

In this RG any word or expression to which a meaning has been assigned in the NNRA [1] or the Regulations promulgated in terms of the NNRA, shall have the meaning so assigned. Only additional terms, definitions and abbreviations are provided.

“accreditation” means a third party attestation (e.g. CHE) related to a conformity assessment body conveying formal demonstration of its competence to carry out specific assessment tasks.

“appointed medical practitioner means a health professional who is competent to establish, implement and manage a medical surveillance programme for occupationally exposed radiation workers.

“appointment” means an AMP appointed by authorisation holder to oversee the implementation of the medical surveillance and control programme.

“medical surveillance” means the systematic assessment of workers exposed or potentially exposed to occupational hazards to ensure their initial and continuing fitness for their intended tasks.

“recognition” means appointed medical practitioner who is deemed by the NNR to satisfy the education and training requirements for AMP.

“registration” means appointed medical practitioner registered with the HPCSA.

“refresher training” is used to describe the type of training provided at regular intervals to ensure that competence is maintained.

4.2 Abbreviations

AMP	:	Appointed Medical Practitioner
CHE	:	Council on Higher Education
HPCSA	:	Health Professional Council of South Africa
IAEA	:	International Atomic Energy Agency
KSC	:	Knowledge, Skills and Competences
MHSA	:	Mine Health and Safety Act, 29 of 1996
NNR	:	National Nuclear Regulator
NNRA	:	National Nuclear Regulator Act, Act 47 of 1999
RG	:	Regulatory Guidance Document

5 LEGAL BASIS

5.1 Mine Health and Safety Act, No 29 of 1996 as amended (MHSA)

The MHSA [2] outlines the employer's responsibilities in appointment of competent persons to conduct occupational hygiene measurements and to conduct medical surveillance.

The Guideline for Compilation of a Mandatory Code of Practice [4] on the roles and Responsibilities of Occupational Health Practitioners in a System of Medical Surveillance at a Mine covers the main roles and responsibilities, procedures and processes involved in designing and implementing occupational health programs in line with the existing health and safety risks at the mine where the employee works. It applies to all role players involved in occupational hygiene and medical surveillance at a mine, including radiological examinations.

5.2 Health Professions Council of South Africa, Act 56 of 1974

Registration with HPCSA is a pre-requisite for professional practice (Section 17 of HPCSA Act of 1974). The Medical and Dental Board registers practitioners falling under the professions medical, dental and medical science.

Every person desiring to be registered in terms of the HPCSA Act [3] must apply to the registrar and must submit the qualification which, in his or her submission, may entitle him or her to registration, together with such proof of identity and good character and of the authenticity and validity of the qualifications submitted as may be required by the professional board concerned.

The HPCSA establishes a generic framework of core competencies and exit concerns for the training and education of medical, dental and medical science practitioners. The HPCSA informs curriculum development processes, and ensure adherence by training institutions to the core competencies and training frameworks. Furthermore the HPCSA ensures effective communication with stakeholders and establishes up-to-date and relevant ethical rules of behaviour and conduct, while facilitating professional matters of decision making.

5.3 National Nuclear Regulatory Act 47 of 1999, Standards and Regulatory Practices

The General Nuclear Safety regulation [8] requires specifically in PART SIX: Radiation Protection, Waste Management and Decommissioning as it relates to AMP's that:

"An authorisation holder's appointed medical practitioner and appointed medical practitioner-in-training shall be conversant with occupational health care and shall be competent and trained in the following areas:

- *Principles of occupational health;*
- *Biological effects of exposure to ionizing radiation;*
- *Radiation physics, the nature of radiation hazards and the principles of radiation protection;*
- *Categorisation of employees in respect of radiation exposure;*
- *The hazards of contamination with radioactive material; and*
- *The purpose and nature of medical surveillance and control programmes for the activity.*

All entries in the health register shall be made by an appointed medical practitioner or a person so authorised in writing.

Appointed medical practitioners, medical practitioners-in-training and nurses who are employed for duties in the medical surveillance and control programme shall be registered with a recognised professional body."

6 AMP RECOGNITION PROCESS

6.1 AMP Training and Recognition Process

6.1.1 Figure 1 below describes the overall process of applying for recognition as an AMP.

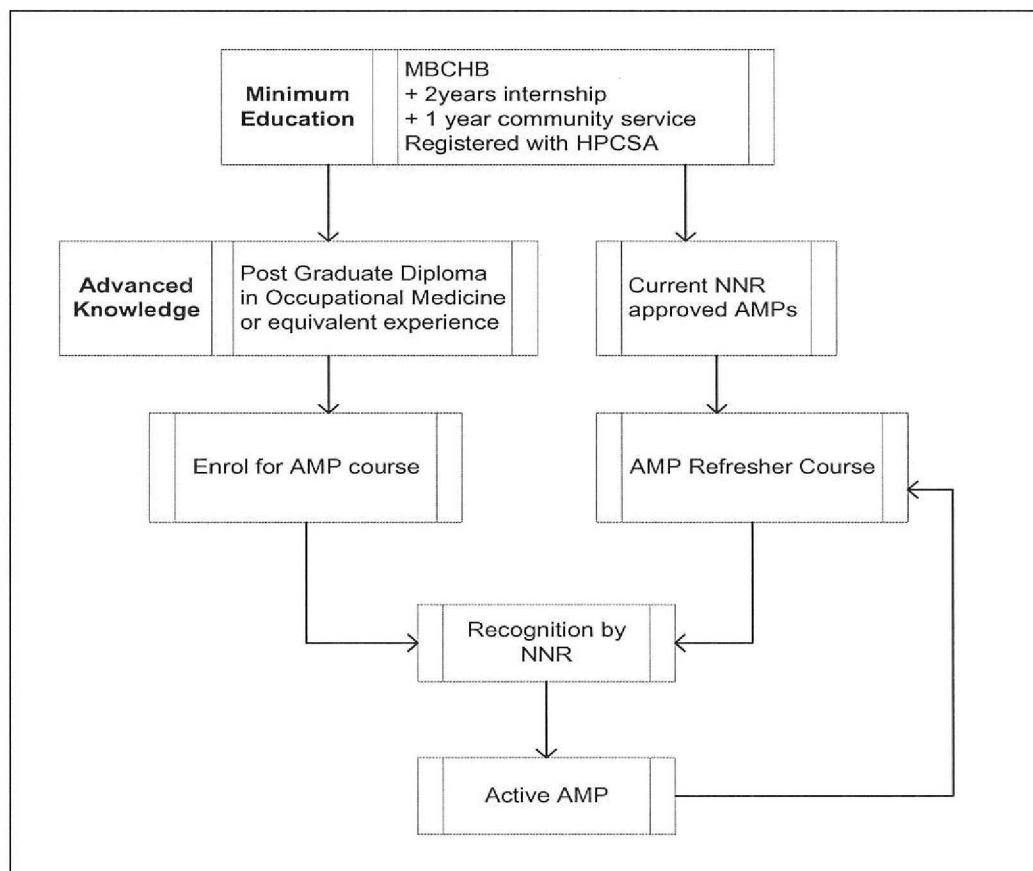


Figure 1: AMP Training and Recognition

6.2 Education and Training

- 6.2.1 Candidates should meet the minimum qualifications necessary for employment as an AMP consisting of a MBChB, 2 years clinical training, one year community service and registered by the HPCSA as competent to act independently as a medical practitioner.

6.3 Advanced (Additional) qualifications and experience

- 6.3.1 Candidates should be in possession of a Post Graduate qualification in Occupational Medicine, should have obtained work experience as an AMP or AMP-in-training or should have obtained practical experience (5 years) in occupational health.
- 6.3.2 AMPs already recognised by the NNR should have a minimum of 5 years work experience as an AMP to be able to only attend the refresher training course.
- 6.3.3 Current AMPs with less than 5 years work experience should apply for recognition from the NNR within a period of 3 years after the establishment of the AMP course.
- 6.3.4 Prospective AMPs with occupational health working experience less than 5 years should attend the full AMP course.

6.4 Recognition and Appointment as AMP

- 6.4.1 A person who has successfully completed the AMP training course should be deemed to satisfy the requirements for recognition.
- 6.4.2 Appointment of AMPs by authorisation holders should be subject to recognition by the NNR.
- 6.4.3 Written acceptance of the recognition as AMP should be obtained from the NNR.
- 6.4.4 Authorisation holders should provide the NNR with a portfolio of evidence that candidates meet the requirements for an AMP and should ensure that the qualifications remain current.
- 6.4.5 Appointments of AMPs should be in writing, clearly specifying the responsibilities of the appointee.
- 6.4.6 A Medical Practitioner may be appointed as an Appointed Medical Practitioner-in-training and should practice under the supervision of an AMP.
- 6.4.7 The Appointed Medical Practitioner-in-training should complete the necessary AMP training within a period not exceeding 12 months from the date of appointment.
- 6.4.8 Registered nurses given direct medical surveillance programme responsibilities should be appointed by the authorisation holder and supervised by an AMP.
- 6.4.9 Where the authorisation holder has more than one AMP, a Responsible Appointed Medical Practitioner should be nominated.

6.5 AMP Status

6.5.1 To maintain an active status, the refresher AMP course should be attended, every 5 years.

7 TRAINING FRAMEWORK

7.1 Training Institution

- 7.1.1 A training institution appointed by the NNR should develop and implement the AMP training course.
- 7.1.2 The institution should have the necessary expertise in the design, development and implementation of training and learning programmes.
- 7.1.3 The institution should have the necessary physical infrastructure, qualified and experienced facilitators and moderators, and specialist skills to develop and evaluate the course material.

7.2 AMP Training Course

- 7.2.1 A comprehensive AMP training course should comprise initial training and refresher training to ensure that knowledge, skills and competencies are maintained.
- 7.2.2 The approach to the training course should be based on the principles of Analysis, Design, Development, Implementation and Evaluation.
- 7.2.3 In designing and reviewing the training courses for AMPs consideration should be given to the following:
 - international and national legislation including aspects relevant to radiation protection;
 - the most recent textbooks and reports in the literature such as those produced by the IAEA;
 - reports, recommendations and protocols from relevant International organisations, professional and scientific bodies associated with the specific areas;
 - theoretical and practical training;
 - use of modern developments in educational and training methods, such as self-study training, computer based multimedia training packages and distance learning techniques.
- 7.2.4 The AMP training course should include topics such as Nuclear and Atomic Physics, Radiobiology, Radiation Physics and Dosimetry, Radiation Protection and Safety, Quality Control and Optimisation, Radiation Legislative and Regulatory Framework and Medical Surveillance Programmes. Refer to Appendix 1 for the minimum required topics underpinning the role, mission and key activities of an AMP.
- 7.2.5 A refresher AMP training course should be established with topics to refresh fundamental concepts and to review specific topics.

7.2.6 The training courses should be periodically reviewed and modified as necessary.

7.3 Accreditation

7.3.1 The AMP training course and institution should carry accreditation by an external, independent accreditation body according to established national standards and guidelines.

8 APPEALS

8.1 Prospective AMPs may appeal against a decision by the NNR:

- not to recognise an applicant as an AMP;
- to impose conditions on a recognition; or
- to revoke a recognition.

8.2 Persons wishing to appeal should submit a request within three months of receiving formal notice of the NNR decision.

8.3 Documentary evidence in support of the appeal should be provided to the Chief Executive Officer of the NNR.

9 REFERENCES

The following references were consulted during the compilation of this document:

- [1] Act No. 47 of 1999, National Nuclear Regulator Act
- [2] Mine Health and Safety Act, No 29 of 1996 as amended
- [3] Health Professions Act, No 56 of 1974
- [4] Guideline for Compilation of a Mandatory Code of Practice on the roles and Responsibilities of Occupational Health Practitioners in a System of Medical Surveillance at a Mine, 2013
- [5] GSR Part 3 (Interim) Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA, 2011
- [6] Building Competence in Radiation Protection and the Safe Use of Radioactive Sources, IAEA Safety Guide, 2001
- [7] Radiation Protection No 175, Guidelines on Radiation Protection Education and Training of Medical Professionals in the European Union, 2014
- [8] Draft NNR General Nuclear Safety regulations, 2014
- [9] LG-1017, Rev 1, "A Guide to the Requirements for Appointed Medical Practitioners", 2004
- [10] LD-1077, Rev 1, "Requirements for Medical and Psychological Surveillance and Control at Koeberg Nuclear Power Station", 2004

- [11] LG-1016, Rev 0, "Guidance to the Medical Surveillance and Control of Nuclear Installations Personnel and Persons engaged in Activities Involving Nuclear-Hazard Material", 1991
- [12] RD-011, Rev 0, "Requirements for Medical Surveillance and Control of Persons Occupationally Exposed to Radiation: Mining and Minerals Processing", 2002

APPENDIX 1: MINIMUM AMP TRAINING TOPICS

The basic training program should as a minimum include the following aspects/topics

- Atomic structure and radioactivity
- Types of radiation
- Radiological quantities and units
- Interaction of radiation with matter
- Principles of radiation protection
- Radiation dose concepts, interpretations, indicators of radiation exposures
- Physical characteristics of X-ray systems
- Fundamentals of radiation detection
- Fundamentals of radiobiology, biological effects of radiation
- Deterministic and stochastic effects and respective dose ranges
- Acute and chronic radiation exposure
- Risks of cancer and hereditary diseases
- General principles of radiation protection
- Radiation sources of exposure
- Particular staff radiation protection aspects, including radiation doses
- Typical doses from diagnostic procedures
- Risks from foetal exposure to ionising radiation
- Quality control and quality assurance in radiation protection
- National regulations and international standards
- Radiation dose management of pregnant staff
- Management of accidents/unintentional exposures
- medical and health surveillance programmes
- Coordination with other medical and technical professionals.
- Pregnancy and risks to the foetus from exposure to ionising radiation
- Exposure assessment, investigation and follow up
- Regulations and international standards relevant to radiation protection

COMMENTS ON NNR RG-0013REV. 0, "TRAINING AND REGISTRATION OF APPOINTED MEDICAL PRACTITIONERS"

#	Reviewer	Section	Original text, and review comments	NNR comment (Accepted/Rejected)	Proposed new text	Resp
1	Necsa	4.1	Comment: The definition AMP should only refer to medical practitioners, a term 'appointed health practitioners' can be used for the health professionals.	Accepted	Rephrased the definition to address the comment; health professional phrase removed from bold text.	AM/MD
2		6.5.2	Comment: 3 year re-training may place a huge administrative and financial burden on everyone concerned. Consideration should be given to a Continuing Medical Education (CME) program which can be done online.	Accepted	The required period for refresher training has been changed to 5 years. On-line training for refresher courses will be considered and recommended to the training institution.	
3		Appendix 1	Comment: The focus of the course is mainly on physics and radiation protection. More emphasis should be placed on the medical aspects in order to ensure the desired outcome.	Rejected	The training course will be structured to cover all aspects of medical surveillance included in the legal and regulatory framework, as well as the topics in Appendix 1, which is consistent with international references.	
4	Koeberg	1	Original text: "The IAEA GSR Part 3 [5] requires that the government shall ensure that requirements are established for education, training, qualification and competence in protection and safety of all persons engaged in activities relevant to protection and safety as well as the formal recognition of qualified experts." Comment: A clarification statement on the responsibility of government department, i.e. department of Energy (DoE), or Department of Health (DoH).	Accepted	The NNR as the Regulatory Body (RB) is responsible for regulatory control of nuclear facilities and activities establishes high level requirements for education; training and qualification and competence. The NNR cannot make pronouncements on the role and functions of the DoE and DoH.	AM/MD
5		1	Original text: "It also requires that the government shall ensure that arrangements are in place for the provision of the education and training services required for building and maintaining the competence of persons and organizations that have responsibilities relating to protection and safety." Comment: A clarification statement should be made where will the training take place.	Accepted	The NNR is engaging with training service providers to establish the AMP course. The RG will be implemented once the training course is established. Details about the preferred institution and course development will be communicated to authorization holders once available.	AM/MD
6		6.3.2	Original text: "Candidates should also have completed a course/module that consists of specialized KSC's in radiation protection and medical surveillance. This can be obtained through completion of the AMP short course or as selective module that is part of the qualification in Occupational Medicine." Comment: A clarification statement should be made if "short course" will be the same course as in Appendix 1.	Accepted	A section has been included on the AMP course, which will consist of a full course, and a refresher course.	AM/MD
7		6.5.1	Original text: "Requalification programmes should be in place to ensure that registered professionals in terms of the Nuclear Regulatory Framework maintain, develop and improve their KSC in the area of medical radiation protection." Comment: Suggest that detailed requalification programmes are defined.	Accepted	The term "requalification" has been replaced by "refresher" as part of the section on AMP course.	AM/MD
8	Tronox	Supersedes	Original text: "Requirements in RD-011 Requirements for Medical Surveillance and Control of persons occupationally exposed to radiation: Mining and Minerals Processing as it relates to training and registration of Appointed Medical Practitioners." Comment 1: Does this mean all conditions mentioned in RD011 not mentioned in this RG now becomes obsolete? Several of the RD011 requirements are not covered in RG-0013. Comment 2: Does this mean the RG replaces the RD? What is the legal standing of the RG? i.e. is this a requirement or guideline? If this document is a guideline, it is not enforceable but if it is a RD, it becomes part of the conditions of the COR. The title RG (Regulatory Guide) is then misleading.	Rejected	New regulations and guides are being drafted by the NNR, which will replace existing RDs and LGs. RD-011 requirements will not become obsolete, but will be included in a RG on guidance for medical surveillance. Guidance documents assist authorisation holders or/and applicant for authorisations in meeting the regulatory requirements. In general guidance documents have to be adhered to by the holder/applicant. Any deviation from NNR guidance has to be justified.	AM/MD
9		1	Original text: "It also requires that the government shall ensure that arrangements are in place for the provision of the education and training services ..." Comment: Has the NNR and/or government made such arrangements i.e. which institution has been tasked with providing the required training as indicated in Appendix 1?	Rejected	The NNR is engaging with training service providers to establish the AMP course. The RG will be implemented once the training course is established. Details about the preferred institution and course development will be communicated to authorization holders once available.	AM/MD
10		2	Original text: "The RG supersedes relevant guidance ..." Comment: Does this mean the RG replaces the RD? What is the legal standing of the RG? i.e. is this a requirement or guideline? If this document is a guideline, it is not enforceable but if it is a RD, it becomes part of the conditions of the COR. The title RG (Regulatory Guide) is then misleading.	Rejected	New regulations and guides are being drafted by the NNR, which will replace existing RDs. RD-011 requirements will not become obsolete, but will be included in a RG on guidance for medical surveillance. Guidance documents assist authorisation holders or/and applicant for authorisations in meeting the regulatory requirements. In general guidance documents have to be adhered to by the holder/applicant. Any deviation from NNR guidance has to be justified. Under "Approval Record" in the RG-0013 document it is stated that RG-0013 supersedes training and registration of AMP in RD-011.	AM/MD

11		4.1	Original text: "... tasks." Comment: Consider including an example of such a body e.g. HPCSA?	Accepted	The Council on Higher Education has been included as an example in this section.	AM/MD
12		4.1	Original text: "AMP ..." Comment: Definition requires clarification. Currently it is interpreted that, for example, a doctor with a post graduate certificate in occupational health is automatically regarded as an appointed AMP. No extra training in radiation field and no legal appointment required. Clarification of appointment also required – legally appointed by holders or elsewhere? Should this definition not rather refer to AMP and not Appointed AMP?	Accepted	This has been changed and clarified in Figure 1. A distinction is made between required training for current and prospective AMPs. All AMP's are required to either attend the full AMP or the refresher course on implementation of the RG. The NNR will verify the training credentials, and all appointment of AMPs by holders will be made subject to recognition by the NNR (letter). Appointment and Recognition are addressed in the same section.	AM/MD
13		4.1	Original text: "recognition ..." Comment 1: Contradicts 7.2.3 that Holders should only appoint the AMP subject to recognition of the NNR. Recognition comes first, then appointment. Comment 2: Why is NNR recognition at all required? Must be clearly explained why recognition by NNR is also required if the AMP is registered with the HPCSA?	Accepted	1. HPCSA registration as a AMP is not required in RG-0013, the AMP has to be registered with HPCSA as a medical practitioner. 2. The appointment of the AMP is subject to recognition by the NNR, through education and training verification.	AM/MD
14		5.3.1	Original text: "... appointed medical ..." Comment: Does this imply that the holder has to have both an AMP and an AMP-in training - or is one AMP sufficient? Is 5.3 only applicable to the Nuclear industry, or because it is included in this RD also enforceable on the NORM industry?	Accepted	The COR requires the appointment of an AMP. The new draft Regulations require that a medical practitioner or medical practitioner-in-training shall be appointed to oversee the implementation of the medical surveillance and control programme. The number of AMPs will be at the discretion of the holder. The new draft Regulation is applicable to all holders of authorization, NL and COR.	AM/MD
15		5.3.1	Original text: "... areas ..." Comment: Are the sections below covered in App 1? Are all of these conditions then enforceable on both Nuclear and NORM facilities because they are listed in this RG-0013 applicable to both industries?	Accepted	The topics in Appendix 1 are consistent with international references.	AM/MD
16		6.1.1	Original text: "Alternatively the person must or have completed an accredited course covering the required ..." Comment: Are the sections below covered in App 1? Are all of these conditions then enforceable on both Nuclear and NORM facilities because they are listed in this RG-0013 applicable to both industries?	Accepted	1. There is currently no training course being implemented. The topics in Appendix 1 are consistent with international references.	AM/MD
15		5.3.1	Original text: "... areas ..." Comment: Are the sections below covered in App 1? Are all of these conditions then enforceable on both Nuclear and NORM facilities because they are listed in this RG-0013 applicable to both industries?	Accepted	The topics in Appendix 1 are consistent with international references.	AM/MD
16		6.1.1	Original text: "Alternatively the person must or have completed an accredited course covering the required KSC's and be found competent on all of these aspects. Comment 1: Currently, where is this course offered? Is it accredited? Comment 2: Requirement that training and education should "cover" KSC's is very vague and difficult to implement and to proof compliance and competence. How will quality, level and type of training on these aspects be managed? How will holders know AMP's qualifications covered all of these aspects? Define "covering": what level of competency and formal testing is required for each KSC?	Accepted	1. There is currently no training course being implemented. 2. Provisions for the training institution have been included in the RG. Holders will be informed once training course is ready. Competence, testing, objectives will be covered in proposals to establish the course, the training provider needs to apply for the course to be accredited.	AM/MD
17		6.2.1	Original text: "... HPCSA ..." Comment: Which HPCSA category and specialties will be acceptable for AMPs? All categories?	Accepted	HPCSA registration as medical practitioner is required, not registration as AMP. The training course will be accredited by a recognised accreditation body. The NNR will verify the training credentials and will maintain a database with all AMPs.	AM/MD
18		6.3.2	Original text: "... through completion of the AMP short course ..." Comment: Which institution provides this? Level and depth of knowledge and competency testing not specified. Must be measurable.	Accepted	The training institution will be appointed by the NNR. The level and depth of knowledge and competence for the course will be defined by the training institution and reviewed by the NNR.	AM/MD
19		6.4.1	Original text: "Appointed Medical Practitioners should be registered with the National Nuclear Regulator (NNR)." Comment: Is the registration with the HPCSA not sufficient for recognition by the NNR?	Accepted	HPCSA is for medical, not radiation aspects. The proposed course must be attended for appointment as AMP, and recognition by NNR prior to appointment. "Registration" has been replaced with "recognition".	AM/MD
20		6.4.2	Original text: "A person who is in possession of the KSC in Appendix 1 should be deemed to satisfy the requirements for recognition if they are currently approved by the Regulator to act as an AMP." Comment: What will count as acceptable proof if these subjects are only "covered" as smaller sections in a larger module?	Accepted	Current AMPs will be required to attend refresher training, depending on the years of experience working as a AMP. See Figure 1 and Section on Advanced Qualifications and Experience. All AMPs will have to attend either the full or refresher course.	AM/MD
21		6.4.3	Original: "Authorisation holders should provide the NNR with a portfolio of evidence that candidates meet the requirements for an AMP and should ensure that the qualifications are current." Comment 1: What is meant by current? Define frequency and type of qualifications subject to this condition as degrees are once off and cannot be kept "current". Comment 2: Is this a once off submission or will it be carried out as part of the Medical Surveillance Programme submission to the NNR or periodically?	Accepted	1. Current means that the AMP status should be kept active, through attendance of a refresher course as stipulated in the Section on AMP Status, after which the NNR will recognise the credentials prior to re-appointment as AMP. 2. AMPs needs to attend a refresher course every 5yrs. It should not necessarily be part of the submission of the Medical Surveillance Programmes.	AM/MD
22		6.5	Original text: "Re-qualify" Comment: Clarify what does it mean to re-qualify to be recognised by the NNR as an AMP please?	Accepted	"Re-qualify" has been replaced with refresher. After 5yrs the AMP needs to do a refresher course. Provision for Refresher Training has been included in a new section on AMP status.	AM/MD

23		6.5.1	Original text: "Requalification programmes should be in place ..." Comment: By who? NNR?	Accepted	Rephrased to indicate that AMP's should attend refresher programme offered by training provider appointed by the NNR.	AM/MD
24		6.5.1	Original text: "... develop and improve their KSC in the area of medical radiation protection." Comment: Define Improve – how can knowledge obtained be improved. How will this be measured? How can holders be held responsible for such a condition that is not measurable and not in their power to control?	Accepted	New KSCs can include new developments e.g. regulatory standards, development in radiation protection and medical aspects. The review of the training course should be conducted on a periodic basis by the appointed training institution. Evaluation mechanisms for the full and refresher courses will be proposed by the training institution.	AM/MD
25		6.5.2	Original text: "Registration as an AMP is subject to the completion of refresher training every 3 years, and the Regulator notified about the outcome." Comment: Where will the refresher be carried out? Furthermore, once the basics of Radiation Protection have been understood, is there really a need to do a refresher? Clarify what is meant by notified? Does notification mean just a formal letter or should it be an ACR request from the Holder every three years to confirm that the AMP completed the refresher training? Need for this requirement must be validated. For example: Doctors that obtained their degree in medicine received the qualification once off and do not have to do refreshers to stay doctors?	Accepted	The NNR engaging with service provider to establish a AMP course. Full and Refresher courses will be offered at the same institution, which will be appointed by the NNR. Refresher course will ensure KSCs remain up to date, in terms of new developments in medical surveillance, or new regulatory or international standards. There should be formal correspondence to NNR for the purpose of recognition of prospective AMPs.	AM/MD
26		7.1.1	Original text: "In designing and reviewing the training programmes for AMPs ..." Comment: Who is going to design and review the training programmes? Universities? Holder cannot be held responsible for training programme conditions as it is not in their power to control.	Accepted	NNR is engaging with service provider to establish an AMP Training Course. The full/initial and the refresher will be hosted at the same institution. The holders should ensure that AMP's are trained by the NNR approved training provider.	AM/MD
27		7.1.2	Original text: "The training programme should as a minimum include the required KSC underpinning the role, mission and key activities of the AMP as contained in Appendix 1." Comment: Details in Appendix 1 is not detailed and measurable. How will these be interpreted by the various training providers and accreditation body might vary to what the NNR intended. How will competency in each KSC be proved? Holder cannot be held responsible to ensure AMP education fulfil in these requirements as training programmes are not in their control. Holder cannot be held responsible to ensure AMP education fulfil in these requirements as training programmes are not in their control.	Accepted	NNR will approve the training course/content. Accreditation plans should also be provided/submitted by training provider. NNR will ensure that an institution with relevant expertise in establishing training courses and radiation/medical aspects is appointed to develop and manage the course. Holders will be required to ensure AMP's are trained by the NNR appointed training provider in accordance with the RG.	AM/MD
28		7.2.1	Original text: "The AMP training course should carry accreditation by an external, independent accreditation body according to established national standards and guidelines." Comment: Will AMP courses be accredited? Does the training provider also need to submit proof of accreditation to the NNR? Do they also get a formal appointment as an NNR Recognised training facility for AMPs? Will holders be provided with such proof? Do such accreditation bodies exist? Have they been approached with these newly proposed short courses and refresher training courses?	Accepted	NNR will require an accreditation plan from the training provider. The accreditation process should not affect the AMP recognition and appointments. Accreditation is normally included on training certificates. Accreditation bodies exist e.g. CHE.	AM/MD
29		7.2.3	Original text: "Appointments should be made subject to the recognition of the NNR." Comment: Does it matter which comes first? In 4.1 Definition of "recognition" requires AMP to first be appointed before he can be recognised?	Accepted	NNR will check if the proposed AMP has attended the AMP Training Course, and liaise with the training provider regarding the AMP credentials. Proposed appointments will be formally submitted to the NNR.	AM/MD
30		7.2.4	Original text: "A Medical Practitioner who has not been trained in KSC may be appointed as an Appointed Medical Practitioner-in-training and should practice under the supervision of an AMP." Comment: Define supervision	Accepted	The work of the AMP-in-training must be approved by the AMP. The AMP-in-training will have tasks and functions delegated from the AMP who is still responsible for the medical surveillance programme.	AM/MD
31		7.2.5	Original text: "The Appointed Medical Practitioner-in-training should complete the necessary training within a period not exceeding six months from the date of appointment." Comment: Is this a fair time frame? Why is a time-frame necessary? How long will the KSC short courses be? If the person must complete the KSCs as part of his post graduate in Occupational Health, how long does the course take part-time? Will it fit in the six-months?	Accepted	Holders should design programme for AMP in-training, who should complete the necessary AMP training within a period not exceeding 12 months from the date of appointment.	AM/MD
32		7.2.6	Original text: "Registered nurses given direct programme responsibilities in terms of the legislative and regulatory framework should be supervised by an AMP." Comment: Define supervised	Accepted	The work of the Nurse must be approved by the AMP, who is still overall responsible and liable for the medical surveillance programme.	AM/MD
33		8.2	Original text: "Documentary evidence in support of the appeal should be provided to the Chief Executive Officer of the NNR." Comment: What if you want to appeal the CEO's decision? Can you approach the Board of NNR and then the Minister as outlined in the NNR Act?	Rejected	The process is outlined in chapter 6 of the NNRA, the appeal starts with CEO, Board, then Minister,	AM/MD

34		Appendix 1	Original text: "AMP KSC" Comment: Measuring and monitoring if all aspects covered in this appendix will indeed be covered by said training will be difficult. Again, holder cannot be held responsible to ensure quality of AMP training was sufficient. Not in their control. How many training providers will be involved? Will each make up their own curriculum? Will each be separately recognised by the NNR? Level and depth of training per aspect not specified here leaving it open for interpretation for training providers. Level of competency and testing per aspect not specified. Would you required exams etc.?	Accepted	One institution selected by the NNR will conduct the AMP training. The appointed training institution will design and manage the AMP course. Holders need to ensure that the AMP's are trained at this institution.	AM/MD
35	Richards Bay Minerals		Comment: No mention is made as to who will be providing the training.	Accepted	The NNR is engaging with service provider to establish a TC. Refresher and the main course will be implemented at the same institution. Refresher courses will ensure that KSCs remain up to date. Proof of course attendance should be provided formally to the NNR prior to appointment of AMP. Holders must make sure that AMP's are trained by NNR appointed training provider.	AM/MD
36			Comment: The course details are not reflected i.e. distant/part-time learning; period of training.	Accepted	A section on requirements for the AMP training course has been added. Holders will be informed about the process of establishment of the AMP training course. The course will be accredited and include all necessary requirements/arrangements.	AM/MD
37			Comment: The document refers to a "training program" and "refresher training" -What is the difference?	Accepted	The AMP training will consist of an "initial or full course and a "refresher course"	AM/MD
38			Comment: Do AMP's who have completed the N-AMP training and is presently registered with the NNR still have to do the "refresher training" and if so what will it consist of?	Accepted	All AMPs including those currently recognised by the NNR will need to do refresher training. Information on the AMP status has been included in a new section.	AM/MD
39	Vesuvius		Comment: "Our company doctor already complies with the minimum education and advanced knowledge requirements as out in the framework for registration. Kindly forward me the relevant forms or process to be followed for the application with the NNR as AMP."	Rejected	All AMPs including those currently recognised by the NNR will need to attend refresher training, every 5 years. The initial and refresher AMP courses will be developed and offered by the same training institution.	AM/MD
40	Company - John Selby	6.3.2	Original text: "... AMP short course ..." Comment: This has not been available in RSA for some years and needs to be re-established prior to implementing this guide.	Accepted	NNR is engaging with service provider to establish a Training Course. The refresher and the initial AMP training course will be offered at the same institution. Holders must make sure that all AMP's are trained by the training institution appointed by the NNR.	AM/MD
41		6.5.1	Original text: "Requalification programmes ..." Comment: See comment above	Accepted	"Requalification" has been replaced with "Refresher". The AMP course will need to be established before the RG can be implemented.	AM/MD
42		7.2.1	Original text: "The AMP training course should carry accreditation by an external, independent accreditation body according to established national standards and guidelines." Comment: Will the course be accredited by the NNR?	Accepted	NNR will require accreditation by a recognised body such as CHE. NNR will require an accreditation plan, and will review the course contents prior to implementation. The course will be accredited by a recognised accreditation body.	AM/MD
43		Appendix 1	Original text: "The basic training program should include the following topics ..." Comment: The content of the program is fine but there is no reference in this guide on who is competent to develop and run such a course.	Accepted	A new section on AMP Training Course has been included.	AM/MD
44	African Radiation Consultants	6	Original text: "REGISTRATION AS AN AMP WITH THE NNR" Comments: Registration with HPCSA, Certification with NNR? Concuras per Terms and Definitions above	Rejected	Registration with HPCSA is required for medical practitioners, not for AMP. The NNR will recognise the AMP training, and maintain a database of AMPs/records.	AM/MD
45		6.1	Original text: "Framework of registration" Comment: Community service and Internship only applicable to persons applying to the HPCSA for the first time?	Accepted	Community service and internship are part of qualifying and registering with HPCSA as medical practitioner.	AM/MD
46		6.1.1	Original text: "The figure above ..." Comment: According to this framework, a person can get certification with the NNR without doing the AMP course.	Rejected	The figure has been revised, as it is required that all AMP's attend the initial or refresher AMP course.	AM/MD

47		6.1.2	Original text: "... have a qualification in occupational health that either includes a module/course on the skills, knowledge and competences (KSC's) as listed in Appendix 1 or have completed an accredited course covering the required KSC's." Comment: "Please indicate (are there any in RSA) "qualification" and "accredited courses" that will cover the skills in Appendix 1"	Accepted	NNR is engaging with a training institution to establish an AMP Training Course. Refresher and the initial AMP training course will be at the same institution. Holders must make sure that AMP's are trained by the NNR appointed institution. Refresher training will ensure that KSCs stay up to date. There should be formal correspondence from the holder for the NNR to recognise the AMP training attended.	AM/MD
48		6.3.1	Original text: "... Post Graduate qualification in Occupational Medicine," Comment: How to handle persons that have previously been recognised by the NNR, but do not have the education and experience as listed here?	Accepted	Those AMPs currently recognised by the NNR will need to do the refresher course, depending on the number of years working experience. Information on refresher course is included in the section AMP status.	AM/MD
49		6.3.2	Original text: "... AMP short course or as selective module that is part of the qualification in Occupational Medicine." Comment: Is such a course available yet, where is it presented?	Accepted	NNR is engaging with a training institution to establish an AMP Training Course. Refresher and the initial AMP training course will be at the same institution. Holders must make sure that AMP's are trained by the NNR appointed institution. Refresher training will ensure that KSCs stay up to date. There should be formal correspondence from the holder for the NNR to recognise the AMP training attended.	AM/MD
50		6.4.2	Original text: "... currently approved by the Regulator to act as an AMP." Comment: Does the NNR have a list of AMPs that have been approved, and is there a letter to an AMP to state that he/she has been approved?	Accepted	Upon receipt of an application to be recognised with NNR as an AMP, the NNR will respond with letter of approving or rejecting the AMP training based on verification with the training institution. The NNR will capture the details of AMPs in a database.	AM/MD
51		6.5.1	Original text: "Requalification programmes ..." Comment: Are such accredited programmes available and where is it presented?	Accepted	NNR is engaging with a training institution to establish an AMP Training Course. Refresher and the initial AMP training course will be at the same institution. Holders must make sure that AMP's are trained by the NNR appointed institution. Refresher training will ensure that KSCs stay up to date. There should be formal correspondence from the holder for the NNR to recognise the AMP training attended.	AM/MD
52		6.5.2	Original text: "...refresher training ..." Comment: Is such accredited refresher training available and where is it presented?	Accepted	NNR is engaging with a training institution to establish an AMP Training Course. Refresher and the initial AMP training course will be at the same institution. Holders must make sure that AMP's are trained by the NNR appointed institution. Refresher training will ensure that KSCs stay up to date. There should be formal correspondence from the holder for the NNR to recognise the AMP training attended.	AM/MD
53		7.1.1	Original text: "...reviewing the training programmes ..." Comment: Who will review these training programmes - the NNR?	Accepted	The appointed training institution will review the programmes periodically, and provide the NNR with a report in this regard.	AM/MD
54		7.3	Original text: "Appointments of AMP" Comment: Could there be a period to phase in the implementation of the requirements, or to allow AMPs to convert and apply	Accepted	All AMPs currently registered with NNR will need to attend AMP refresher training. The AMP refresher course will be developed by the training institution, and should be attended every 5 years.	AM/MD
55	SciRAD - Dr Dawid de villiers (consultant)	Supersedes	Original text: "...Practitioners." Comment: The last part of the sentence flows onto another page, but it can fit onto the previous one if the approval record is placed a bit higher up on the page.	Accepted	Move Approval Record higher up on the page. To be addressed in the final formatting of the document (RG).	AM/MD
56		1	Original text: "The IAEA GSR Part 3 [5] ..." Comment: Please see my comments on references at the Reference section	Accepted	Included 2011 as part of the reference	AM/MD
57		1	Original text: "... State ..." Comment: Country?	Rejected	Taken from IAEA document	AM/MD
58		2	Original text: "The purpose of this Regulatory Guidance (RG) is to provide for improved ..." Comment: The purpose of this Regulatory Guidance (RG) is twofold: Firstly, to provide for improved ...	Accepted	Inserted "two-fold:"	AM/MD
59		2	Original text: "... Appointed Medical Practitioner (AMP) responsible for medical surveillance at regulated entities and to facilitate the harmonisation of the education and training of AMP's among the regulated entities." Comment: ... Appointed Medical Practitioner (AMP) responsible for medical surveillance at regulated entities. Secondly, and to facilitate the harmonisation of the education and training of AMP's among the regulated entities.	Accepted	Inserted "two-fold," "secondly"	AM/MD

60		5.1	Original text: "Mine Health and Safety Act, ..." Comment: So this document is not relevant to other nuclear facilities such as Necsa or Koeberg?	Rejected	The RG is applicable to all facilities and relevant legislation has been included.	AM/MD
61		5.3.1	Original text: "...SIX" Comment: Six	Rejected	This is consistent with the use of reference in the rest of the RG. The numbering is used in the Draft Regs.	AM/MD
62		6.3	Original text: "Advanced experience" Comment: Advanced (additional) experience	Accepted	inserted "additional"	AM/MD
63		6.5.2	Original text: "... the completion of refresher training every 3 years, ..." Comment: I am confused about the "refresher" and "requalification." A medical professional can become an AMP by completion of a specialised course (with the RP component). After 3 years the person loses the recognition. To keep his/her recognition the person should complete a refresher course and provide the NNR with evidence and he/she is again recognised. Now, how does requalification comes into play as to me that means that the person need to do a specialised course again (not a refresher)?	Accepted	Change to "requalification" to "refresher." Yes, those AMPs currently registered with NNR will need to do refresher. The refresher course will be developed by training institution, less intensive than the main course and conducted every 5 years.	AM/MD
64		7.1.1 ©	Original text: "... use of modern developments educational and training methods. Comment: ... use of modern developments in educational and training methods.	Accepted	Included "in"	AM/MD
65		7.3	Original text: "Appointments of AMP" Comment: Appointments of AMPs	Accepted	Added "s" in AMP	AM/MD
66		7.2.5	Original text: "The Appointed Medical Practitioner-in-training should complete the necessary training within a period not exceeding six months from the date of appointment. Comment: Depending on who provides the training this may not always be possible e.g. person employed in April but training only provided by university every 6 months. So proof of future attendance of course could assist in this regard if 6 month period is lpas	Accepted	Included a period not exceeding 12 months of date of appointment.	AM/MD
67		7.2.7	Original text: "..., a Responsible Appointed Medical Practitioner should be nominated." Comment: What will he/she do in addition to normal AMP work? Should the NNR know who the person is?	Rejected	The appointment of more than one is at the discretion of the holder. There must be at least one AMP who is responsible for the medical surveillance programme. The NNR will need to recognise all AMPs prior to being appointment by the holders.	AM/MD
68		8.2	Original text: "Persons wishing to appeal should submit a request within three months ..." Comment: How long would someone have to wait for an answer to the appeal?	Rejected	The process is defined in section 21 of the NNRA.	AM/MD
69		9	Original text: "The following references ..." Comment: These references are not ranked alphabetically nor in order of use in the document. Also, if I want to find one of them it would be difficult as there is no mention on the publisher or/and author.	Accepted	Will be listed in order of the NNR document hierarchy. First the NNR Act, international references, the regulations (RD's/ LD's), then last are the LG's.	AM/MD
70		9	Original text: "[5] GSR Part 3 (Interim) Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, date? Comment: [5] GSR Part 3 (Interim) Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, date.	Accepted	added 2011	AM/MD
71		Appendix 1	Original text: "The basic training program ..." Comment: Perhaps an Appendix 2 can provide a list of approved training providers or otherwise examples of where training can be obtained.	Rejected	Section on training institution and AMP training course included. The process of establishing the AMP training course will be communicated to holders.	AM/MD