



**DEPARTMENT OF VETERANS AFFAIRS**  
**Veterans Health Administration**  
**National Health Physics Program**  
**2200 Fort Roots Drive**  
**North Little Rock, AR 72114**

In Reply Refer To: 598/115HP/NLR

**JUN 25 2015**

Kevin G. Null  
Division of Nuclear Material Safety  
Nuclear Regulatory Commission (NRC), Region III  
2443 Warrenville Road, Suite 210  
Lisle, Illinois 60532-4352

Re: NRC License No. 03-23853-01VA

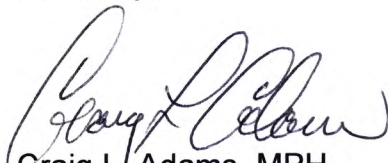
Dear Mr. Null:

We request an amendment to the referenced license to incorporate Enclosure 1 as a revision to Standard Operating Procedure (SOP) 1 for Program Managers to sign permit amendments associated with 10 CFR 35.14 notifications. Furthermore, the most senior Program Manager is authorized to sign emergency and non-routine amendments. This revision has been approved by the National Radiation Safety Committee at its meeting on May 6, 2015.

We note that the enclosed SOP 1 is provided in mark-up format. If this amendment is approved, we will remove the mark-ups and issue the procedure in a finalized format.

If you have any questions, please contact me at 501-257-1571.

Sincerely,



Craig L. Adams, MPH  
Director

Enclosure

**RECEIVED JUN 26 2015**

# Enclosure

Department of Veterans Affairs  
Veterans Health Administration  
Washington, DC 20420

VHA NRSC SOP 01: NHPP Permit Procedures  
Revision date: DRAFT 4/27/2015

## NHPP PERMIT PROCEDURES

*NOTE: In accordance with Paragraph 2 of the Master Materials License (MML) Letter of Understanding dated June 16, 2014, this SOP incorporates administrative changes to the base version dated May 13, 2007, which was previously submitted to the NRC and approved in the MML. The administrative changes do not decrease the effectiveness of the radiation safety program or result in requirements less stringent than NRC regulations. The NRSC has reviewed and approved the changes prior to implementation.*

**1. PURPOSE:** To define procedures and guidelines by which the National Health Physics Program (NHPP) implements the Master Material License (MML) permit program. This SOP also describes the procedures used for review of applications, and follow-up and issuance of permits for use of radioactive materials from field facilities, Program Managers. This SOP is a supplement to procedures given in VHA Directive 1105 (or current number), "Management of Radioactive Materials."

**2. SCOPE:** This SOP pertains to all Veterans Health Administration (VHA) activities involving receipt, possession, use, transport, transfer, or disposal of radioactive material (RAM) under the master materials license issued by the Nuclear Regulatory Commission (NRC).

**3. POLICY:** NHPP staff shall utilize the most current NRC licensing procedures, policies, guides criteria, guidance, and directives in review and issuance of VHA permits to insure consistency between licensing/permitting programs of NRC and VHA. NHPP permitting guidance will be updated as changes are received from NRC. Reviews must be thorough and complete and employ good health physics judgment such that public health and safety is assured. Implicit in the procedures is discourse with permittees to avoid unnecessary correspondence and to ensure prompt and mutually satisfactory information.

### 4. PROCEDURES

#### a. General.

(1) Individual VHA facility hard copy permit files will be maintained at the Radiation Control Program Officer's (RCPO) office in North Little Rock, Arkansas. The RCPO's office will maintain duplicate hard copy and electronic files for essential documents related to the centrally controlled radiation control program and the master materials license. Individual VHA facility hard copy permit files will be stored in a records repository room that meets requirements for federal records repository. Information will be readily retrievable both for NHPP staff use and for program assessments. NHPP ~~field offices~~ will maintain protected access to the electronic files at the RCPO's office, through transfer of hard copy files, or ~~by~~ files maintained by Program Managers at the NHPP field offices.

(2) All VHA license files received from NRC will be repositied at the master, archival file location at the NHPP headquarters, North Little Rock, Arkansas. All relevant facility correspondence and actions pertaining to the permit and inspection process will be part of the master, archival location. Facilities will submit correspondence either in hard copy form or electronically via e-mail to NHPP headquarters. Hard copy documents are logged upon receipt, scanned, and electronically filed according to NHPP Internal Procedures, then archived as described in specific NHPP Internal Procedures.

(3) Files at North Little Rock, Arkansas, will be complete so that required annual MML internal and external assessments and inspections can be accomplished according to NHPP Internal Procedure 31. Relevant files pertaining to the permitting process include:

(a) Current permit application.

(b) All amendments issued (or under review) after permit application and supporting documentation.



(4) Archival copies of material are periodically backed up to long-term stable electronic media.

b. Transition Period. (Note: The transition period was completed in 2003.)

(1) The current NRC license in effect at the time of the issuance will become the effective facility permit.

(2) ~~After~~ Since issuance of the MML, NRC docket files ~~will have been~~ transferred to the RCPO ~~(when requested)~~. Prior central VA files will be replaced by NRC docket files, or the appropriate portion of the file, at the time of receipt. For files not transferred to the NHPP office in North Little Rock, a request to NRC for copies of relevant material may be made as necessary to supplement the transferred files or the prior VA central file.

**Comment [LM01]:** We didn't receive all docket files when the MML was issued; this is an ongoing process. NHPP requests them when needed to complete permit actions.

(3) The current electronic VA central files will be reviewed and supplemented with additional NRC material from the docket files on an "as needed" basis. This included ~~s~~ the ~~current~~ last copy of the NRC license in electronic form.

(4) NRC licenses ~~will be~~ were converted to VHA permits in accordance with the schedule established by the Letter of Understanding (LOU), between NRC and VHA. VHA ~~will~~ issued an administrative letter to convert the existing and most current facility NRC license to a VHA MML permit, followed by permit issuance at the next amendment or renewal opportunity.

c. A permit control and tracking system (PCTS), in electronic format (e.g., databases), will be maintained at NHPP headquarters. The PCTS contains applicable facility information such as facility ID, permit number, expiration date, type of action (renewal, amendment request, new permit), amendment number, and contact and/or correspondence dates to enable tracking of the action process by date and to determine amendment or application status. Assigned actions are also tracked to ensure timeliness goals are met according to NHPP Internal Procedure 14.

d. Permit amendments will be reviewed and assigned within 15 working days of receipt. Renewal applications will be administratively reviewed and assigned within 30 working days of receipt. Review and requests for additional information are normally an iterative process and completion dates cannot be anticipated. Initial and subsequent NHPP reviews will normally be within 30 working days of receipt of information. Exceptions are identified according to established performance indicators and reported to the National Radiation Safety Committee (NRSC) during quarterly meetings.

e. The PCTS will be maintained on the NHPP file server by the office of the ~~Radiation Control Program Officer~~ RCPO. The PCTS will be monitored monthly and updated by NHPP office personnel according to NHPP Internal Procedures. Key information from the PCTS (such as current permit amendments, program codes, and status of amendment requests) will be electronically transmitted for inclusion and availability via the NHPP Web site for use by the applicant and NHPP staff.

f. The format of the VHA permit and amendments issued will follow that of a standard NRC license. The VHA permit number will continue the NRC numbering system, ~~except that "VHA" will precede the NRC license number, e.g., former NRC license number 03-01082-01 will become VHA 03-01082-01.~~

**Comment [LM02]:** We did not do this, we continued using the same number as the permit number.

g. Permit Actions.

(1) Renewal. VHA permits are valid for ~~ten~~ 10 years. Six months prior to the expiration of a permit, the RCPO will send a notification to the facility. The notification will include a link to renewal template documents available on the NHPP Web site for the basic application elements consistent with an NRC Form 313, regulations, Regulatory Guides, and other NHPP documents as described in NHPP Internal Procedure 22. Renewal applications shall be complete in their entirety without references to previously submitted documentation, shall identify any parts of the program that are changing, and shall reflect current operating procedures. Renewal applications shall reach NHPP headquarters at least 30 days prior to the expiration date of the permit and will be deemed "timely filed." A



letter will be sent to the submitting facility authorizing continued use of radioactive material under the conditions of the previous permit until the renewal is approved.

(2) New Permits. When a facility determines that it requires the use of radioactive material, it will contact the NHPP for guidance in submitting a permit application. All requests will be submitted using ~~NRC-NHPP~~ Form 313-~~equivalent documentation~~. Information required to complete the permit application will be similar to that required when applying for an NRC license. The appropriate NRC regulatory guide should be consulted as guidance. Applications for broad-scope permits shall be subject to a pre-permitting site visit. Initial applications should be submitted as far in advance of the desired use date as the availability of information allows, but in any case no less than 90 days before the desired use date. Typical uses requiring extended review time include new research or laboratory facilities, clinical programs, and multi-curie sealed source irradiators. New permit applications must describe how facility design and procedures for operation will minimize contamination consistent with 10 CFR 20.1406.

(3) Amendment requests. These requests may be in the form of a letter, which fully describe the changes needed. Amendment requests should be received by NHPP headquarters at least 30 days prior to the effective date of the requested change.

(4) Actions not needed.

(a) Radiation protection program changes to medical permits may be effected without amendment following the requirements of 10 CFR 35.26.

(b) Generally licensed sources and devices and exempt quantities and items (refer to 10 CFR 30 and 31).

h. Permit Review Process.

(1) Administrative Review. The permit request or action will be initially reviewed to determine if appropriate administrative requirements are addressed, such as proper address, completeness of application (all forms are enclosed), appropriate routing, and signatures.

(2) Technical review.

(a) The technical review consists of utilization of pertinent materials including, as necessary:

1. Regulations;
2. Regulatory Guides with emphasis on NUREG-1556 series documents;
3. Permit review checklists (from NUREG-1556 series documents);
4. Standard permit conditions (from NUREG-1556 series documents or NHPP internal procedures);
5. NRC technical positions (e.g., Branch Technical Positions, Health Physics Position Statements, and Technical Assistance Requests (TAR));
6. Sealed Source and Device Registry at <http://www.hsrp.ornl.gov/nrc/sources/index.cfm>;
7. Technical standards (~~National Council on Radiation Protection and MeasurementsNCRP~~, ~~International Commission on Radiological ProtectionICRP~~);
8. Equipment manuals.



(b) Refer to the Attachment 1 for a description of principal reference documents to be used in the permit review process and as specific for each type of permit. The most current regulatory criteria or resources shall be employed as necessary.

(c) The reviewer may discuss the permit action with other NHPP staff and/or NRC. This may include a formal request for assistance from NRC with regard to interpretation or clarification of rules (e.g. for a TAR). Any deficiencies or clarifications identified in the permit must be communicated to the applicant. In all cases, a complete chronological log of all contacts must be maintained via the PCTS. If a deficiency letter is initiated, standard deficiency phrases will be utilized as appropriate. The applicant will be contacted if the response is later than the requested reply date.

(d) The permittee compliance history must also be reviewed to determine any effects on the status of previous inspections or, in some cases, the scope and detail of review.

(e) Applications that lack significant amounts of information, or are so poorly prepared as to indicate a significant lack of understanding of requirements, may be returned to the facility for resubmission.

## 5. PREPARATION AND ISSUANCE

a. After completion of the technical review and confirmation that a permit request meets all applicable requirements, the responsible Program Manager NHPP field office will prepare the permit and forward a copy of the application and all supporting documents to the RCPO for concurrence and signature. Program Managers may sign permit actions pursuant to requests made under 10 CFR 35.14 (Notifications).

b. The RCPO, acting in the capacity of NRSC Executive Secretary, will sign and forward the permit action to the facility requesting the permit. The completed permit action will be imaged and archived on the NHPP headquarters file server. A copy will be maintained in the NHPP records repository, and a copy will be forwarded to NRC (if requested). Permitting actions will be reported at the next quarterly meeting of the NRSC for concurrence.

c. Emergency and Non-Routine Actions.

(1) Permit actions identified by the facility as "emergency" or "time-urgent" will be processed as soon as possible using the normal procedural steps for permit actions. In the temporary absence of the RCPO, the most senior Program Manager at the North Little Rock, Arkansas, office may sign. Such shall be reviewed for adequacy by the RCPO, immediately upon return.

(2) Permits involving non-standard uses of radioactive material, unregistered sealed sources or devices, or other non-standard instances and uses require approval of NRC prior to issuance.

## 6. TERMINATION/SUSPENSION

a. Permit holders will be instructed to follow the applicable requirements of 10 CFR 20, 30, 40, and 70 when planning for permit termination and subsequent site decommissioning. Permit holders will be further instructed to notify the NRSC, through the RCPO, in the event of permit termination and site decommissioning according to the notification timelines contained in 10 CFR 30.36. The RCPO will use NUREG-1757 guidance to determine the appropriate decommissioning category, and make any necessary NRC notifications per the MML Letter of Understanding. Permit termination will follow the guidelines contained in NUREG-1757.

b. NHPP will submit specific permit decommissioning plans required by 10 CFR 30.36 to NRC for review and approval prior to approval by the NRSC. NRC will maintain the authority to review and approve decommissioning plans on a case-by-case basis per the MML Letter of Understanding LOU.



c. A permit may also be terminated or suspended by the NRSC as a result of non-compliance with permit conditions in accordance with procedures in NRSC SOP 03.

d. NHPP headquarters, North Little Rock, Arkansas, will maintain the archival copies of records required pursuant to 10 CFR 30.35(g).

## 7. REFERENCES

a. Regulatory Guides. Use the most current applicable regulatory guides for "Occupational Health" as available on the NRC public Website at this link:

<http://www.nrc.gov/reading-rm/doc-collections/reg-guides/occupational-health/rg/>

b. Guidance Documents. Use the most current applicable "NUREG-Series Publications" as available on the NRC public Website at this link and with emphasis on the specific document below:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/>

(1) NUREG-1134 Radiation Protection Training for Personnel Employed in Medical Facilities

(2) NUREG-1516 Management of Radioactive Material Safety Programs at Medical Facilities

(3) NUREG-1556, Volumes 5, 7, 9, 11, and 20

c. Inspection Manual Chapter 2800. Use the most current applicable program codes as available on the NRC public Website for Inspection Manual Chapter 2800 at this link:

<http://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/>

8. **RESCISSION:** None

9. **EXPIRATION DATE:** None

10. **FOLLOW-UP RESPONSIBILITY:** Radiation Control Program Officer



**Attachment 1. Example permit types and guidance documents for use in review and preparation of applications of permits.**

<b>Type Permit</b>	<b>Code</b>	<b>Permit review documents</b>
Laboratory R&D - no clinical use	3620	NUREG-1556, Volume 7
Medical Institution - Limited	2120	NUREG-1556, Volume 9
	2121	NUREG-1556, Volume 9
Medical Institution - Broad Type A	2110	NUREG-1556, Volumes 7, 9, and 11
Lab R&D w/ RSC named users	3610	NUREG-1556, Volumes 7, 9, and 11
Limited type clinical use		

Other type uses will be listed on a permit of the type above. These may include

Irradiators	3510	NUREG-1556, Volume 5
HDR	2230	NUREG-1556, Volume 9
Gamma Stereotactic		NUREG-1556, Volume 9
Eye applicators	2210	NUREG-1556, Volume 9
Industrial (Moisture density gauge)	3121	NUREG-1556, Volume 1





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**JUN 25 2015**

Kevin G. Null  
Division of Nuclear Material Safety  
Nuclear Regulatory Commission (NRC), Region III  
2443 Warrenville Road, Suite 210  
Lisle, Illinois 60532-4352

Re: NRC License No. 03-23853-01VA

Dear Mr. Null:

We request an amendment to the referenced license to incorporate Enclosure 1 as a revision to Standard Operating Procedure (SOP) 4 for training of our inspectors and permit reviewers. The proposed revision is in response to a recommendation by NRC in its recent inspection report dated November 17, 2014, to the U.S. Department of Veterans Affairs. We submitted an earlier request on February 5, 2015, which was subsequently voided based on mutual agreement. This revision has been approved by the National Radiation Safety Committee at its meeting on May 6, 2015.

The proposed revision to SOP 4 includes the following primary changes:

- Provides for certain professional board certifications to be used as equivalent training for certain NRC courses,
- Provides for specified vendor courses to be used as equivalent training for specified NRC courses (as supported by information in Enclosure 2 to this letter),
- Updates reference to NRC Inspection Manual Chapter (IMC) 1248 vice 1246 throughout,
- Updates course names to match current NRC offerings,
- Removes NRC OSHA Course G-111, which has not been offered by NRC externally to Master Materials Licensees in many years and specifies an alternate approach,
- Removes NRC Course G-101 (Fundamentals of Inspection) which is no longer offered by NRC; Retains NRC Course G-108 (Inspection Procedures Course),



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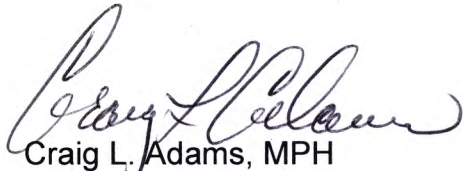
Kevin G. Null

- Removes NRC Course G-304, which is no longer required in NRC IMC 1248, and
- Adds NRC material security Course S-201, which is required by NRC IMC 1248.

We note that the enclosed SOP is provided in mark-up format. If this amendment is approved, we will remove the mark-ups and issue the procedure in a finalized format.

If you have any questions, please contact me at 501-257-1571.

Sincerely,



Craig L. Adams, MPH  
Director

Enclosures



# Enclosure 1

Department of Veterans Affairs VHA NRSC SOP 04: - NHPP Inspector/Permit Reviewer  
Qualifications  
Veterans Health Administration • Revision date: July X, 2015 (proposed)  
Washington, DC 20420

## NHPP INSPECTOR/PERMIT REVIEWER QUALIFICATIONS

### 1. PURPOSE AND SCOPE

a. This standard operating procedure (SOP) establishes the training and qualification requirements for National Health Physics Program (NHPP) professional staff members who conduct permit reviews and/or permit inspections. These professional staff members function as permit reviewers and permit inspectors.

b. This SOP applies to all permitting and inspection actions under the Department of Veterans Health Administration Affairs (VA) master materials license issued by the Nuclear Regulatory Commission (NRC).

### 2. POLICY

a. Permit reviewers and permit inspectors must understand the facilities, equipment, processes, and activities of the radiation safety programs they permit or inspect, as well as the criteria, techniques, and mechanics of permitting and inspection.

b. Permit reviewers and permit inspectors must complete the qualification process in this SOP. The process is based on NRC Inspection Manual Chapter ~~1246~~1248 and helps ensure that the individual permit reviewer or permit inspector has sufficient information and knowledge to conduct permitting and inspection actions that are technically correct and consistent with license conditions, applicable regulations, and VA policies and procedures.

(1) Permit reviewers and permit inspectors must complete the applicable training requirements described in Appendix A, Sections I and II. The training requirements include required initial training, core training, specialized training, supplemental training, and refresher training. The applicable training requirements are in addition to the training and experience required for selection as an NHPP professional staff member.

(2) Permit reviewers and permit inspectors must document training completion as described in Appendix B.

c. The National Radiation Safety Committee (NRSC) must provide oversight for the permit reviewer and permit inspector qualification process.

d. The Radiation Control Program Officer (RCPO) must direct the qualification process and provide recommendations for consideration by the NRSC.

e. The external assessment must evaluate staff qualification and training.

### 3. PROCEDURES - NRSC

a. Provide oversight for the permit reviewer and permit inspector qualification process.

b. Approve or disapprove RCPO recommendations for equivalent training, interim qualification, qualification, or recertification.

c. Recertify qualification for individual permit reviewers or permit inspectors at least annually.

d. Reevaluate interim qualification for individual permit reviewers or permit inspectors at least annually.

### 4. PROCEDURES - RCPO



- a. Direct the permit reviewer and permit inspector qualification process.
- b. Develop specific qualification journals for individual permit reviewers and permit inspectors based on prior training and experience with radioactive materials. Use the template in Appendix B to prepare an individual qualification journal. The RCPO may add additional formal training, self-study, and/or on-the-job training as deemed necessary to prepare the permit reviewer or permit inspector to function independently within NHPP.
- c. Complete annual management accompaniments for permit inspectors.
- d. Convene qualification boards to examine permit reviewers and permit inspectors. Retain signature authority to assess/approve the qualification journal entries and qualification.
- e. Make recommendations to the NRSC for equivalent training, qualification, interim qualification, and recertification for permit reviewers and permit inspectors.

## **5. PROCEDURES - PERMIT REVIEWER AND PERMIT INSPECTOR**

- a. Initiate the qualification process as follows.
  - (1) Begin completion of the required initial training in Appendix A, Section I or Section II.
  - (2) Prepare, in consultation with the RCPO, a qualification journal and begin completion of the training elements.
  - (3) Register for, and attend, available NRC core training courses.
  - (4) Ensure training course certificates and other training documentation are placed in NHPP training files.
- b. Complete interim qualification as follows.
  - (1) Complete required initial training through self-study and/or on-the-job training.
  - (2) Complete accompanied inspections and initial permitting actions.
  - (3) Attend, and successfully complete, available NRC core training courses.
  - (4) Complete entries on qualification journal for training elements accomplished.
  - (5) Participate in, and complete, specialized training, supplemental training, and refresher training as outlined in the qualification journal or made available for permit reviewers and permit inspectors.
  - (6) Complete an oral qualification board.
  - (7) Ensure training course certificates and other training documentation are placed in NHPP training files.
- c. Complete qualification as follows.
  - (1) Function as permit reviewer and permit inspector as approved by NRSC to include annual management accompaniment for inspections.



(2) Attend, and successfully complete, available NRC core training ~~courses~~ or equivalent training courses.

(3) Complete entries on qualification journal for training elements accomplished.

(4) Participate in, and complete, specialized training, supplemental training, and refresher training as outlined in qualification journal or made available for permit reviewers and permit inspectors.

(5) Complete an oral qualification board.

(6) Ensure training course certificates and other training documentation are placed in NHPP training files.

d. Maintain qualification as follows.

(1) Function as permit reviewer and permit inspector as approved by NRSC to include annual management accompaniment for inspections.

(2) Participate in, and complete, refresher training made available for permit reviewers and permit inspectors.

(3) Ensure training course certificates and other training documentation are placed in NHPP training files.

## 6. PROCEDURES - NRC CORE TRAINING COURSES

a. Attend the following NRC core training courses designated for permit reviewers and permit inspectors.

(1) Advanced Health Physics ~~Technology~~ Course (H-201)

(2) Diagnostic and Therapeutic Nuclear Medicine Course (H-304)

(3) ~~Teletherapy and~~ Brachytherapy, Gamma Knife, and Emerging Technologies Course (H-313)

(4) Licensing Practices and Procedures Course (G-109)

(5) Transportation of Radioactive Materials Course (H-308)

(6) ~~Fundamentals of Inspection Course (G-101) or~~ Inspection Procedures Course (G-108)

(7) Root Cause/Incident Investigation Workshop (G-205)

~~(8) Inspecting for Performance Course, Materials Version (G-304)~~

~~(98)~~ Effective Communications for Inspectors (OP)

~~(10) OSHA Indoctrination Course (G-111)~~

(9) NRC Materials Control, Security Systems, & Principles (S-201)

b. Note ~~that~~ the following NRC core training courses are not required for permit reviewers and permit inspectors.



- (1) Safety Aspects of Industrial Radiography Course (H-305)
- (2) Nuclear Materials Safety and Safeguards (NMSS) Radiation Worker Training (H-102) and Site Access Training (H-100)

## **7. PROCEDURES – EQUIVALENT TRAINING**

### **a. Equivalent training based on professional board certifications.:**

- (1) For NRC Course H-201 (Health Physics Technology), certification by the American Board of Health Physics may be accepted as a basis for equivalent training.
- (2) For NRC course H-304 (Diagnostic and Therapeutic Nuclear Medicine), certification by the American Board of Radiology for the Diagnostic Radiologic Physics, Nuclear Medical Physics, or Therapeutic Medical Physics Specialty may be accepted as a basis for equivalent training.
- (3) For NRC Course H-313 (Brachytherapy, Gamma Knife, and Emerging Technologies), certification by the American Board of Radiology for the Diagnostic Radiologic Physics, Nuclear Medical Physics, or Therapeutic Medical Physics Specialty may be accepted as a basis for equivalent training.

### **b. Equivalent training based on successful completion of vendor-provided courses.:**

- (1) For NRC Course G-205 (Root Cause Workshop), successful completion of the 2-day “TapRoot® Incident Investigation and Root Cause Analysis Course®” taught by System Improvements, Inc., may be accepted as a basis for equivalent training.
- (2) For NRC Course H-201 (Advanced Health Physics, formerly named Health Physics Technology), successful completion of the 40-hour “Introduction to Radiation Safety” course and the 40-hour “RSO Training” course (i.e., completion of both courses) taught by Oak Ridge Associated Universities, may be accepted as a basis for equivalent training.
- (3) For NRC Course H-308 (Transportation of Radioactive Materials), successful completion of the “Transportation and Packaging of Radioactive Materials” course taught by Nevada Technical Associates, Inc., may be accepted as a basis for equivalent training.

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## **78. PROCEDURES - QUALIFICATION BOARDS**

- a. Ensure the qualification board has at least two members, one of whom is the RCPO.
- b. Evaluate the completed entries on the qualification journal.
- c. Determine the status of completing any pending NRC core training or equivalent training courses.
- d. Interview the permit reviewer or permit inspector by asking questions related to all training elements in the qualification journal with emphasis on open-ended questions that allow the professional staff member to demonstrate a depth of knowledge and understanding of situations that require evaluation and interpretation of regulations, policies, and procedures. Avoid close-ended questions. Limit technical questions as a significant aspect of the qualification board.
- e. Review the results of the qualification board with the permit reviewer or permit inspector.
- f. Complete the recommendations section on the qualification journal for either qualification or interim qualification. State limitations or additional training elements, if interim qualification is recommended.

- g. Provide a recommendation to the NRSC for qualification or interim qualification.

#### **98. PROCEDURES - INTERIM QUALIFICATION**

- a. Use the following definition for interim qualification.

“Qualification of a permit reviewer or permit inspector to conduct independent permitting and inspection actions in specified areas pending completion of NRC core training or equivalent training courses. Requires successful completion of a qualification journal, qualification board, RCPO recommendation, and NRSC approval.”

- b. Limit interim qualification for permit reviewers and permit inspectors to a period not to exceed 12 months without reevaluation and approval by NRSC. Ensure specific limitations are listed on the qualification journal.

- c. Use the following requirements for permit reviewers.

(1) Complete all training elements on qualification journal, other than the NRC core training or equivalent training courses not available for attendance.

(2) Complete initial permit reviews with quality control checks by other permit reviewers.

(3) Evaluate permit reviewer’s previous experience with radioactive materials and permitting activities.

(4) Complete qualification board.

(5) Provide for the following RCPO oversight: restrict reviews based on specific limitations, approve specific permit review assignments, and approve technical reviews, permits, and associated documentation.

- d. Use the following requirements for permit inspectors.

(1) Complete all training elements on qualification journal, other than the NRC core training or equivalent training courses not available for attendance.

(2) Complete three accompanied inspections with at least one management accompaniment.

(3) Evaluate permit inspector’s previous experience with radioactive materials and inspection activities.

(4) Complete qualification board.

(5) Provide for the following RCPO oversight: restrict inspections based on specific limitations, approve specific inspection assignments, review permit files with the inspector, approve inspection plan, and approve inspection reports, enforcement actions, and inspection records.



## APPENDIX A

### TRAINING ACTIVITIES

This appendix has two sections. Section I establishes the training and qualification requirements for professional staff members who complete permit reviews. This is the section for permit reviewers. Section II establishes the training and qualification requirements for professional staff members who conduct inspections. This is the section for permit inspectors.

The following acronyms are used in this appendix.

<u>FAQs</u>	— <u>Frequently Asked Questions</u>
MML	—Master Materials License
NHPP	—National Health Physics Program
NRC	—Nuclear Regulatory Commission
NRSC	—National Radiation Safety Committee
<u>OSHA</u>	— <u>Occupational Safety and Health Administration</u>
RCPO	—Radiation Control Protection Officer
SOP	—Standard Operating Procedure
VA	—Department of Veterans Affairs
VHA	—Veterans Health Administration

## SECTION I

### TRAINING REQUIREMENTS - PERMIT REVIEWER

**1. APPLICABILITY:** The training described below is required for permit reviewers. Permit reviewers review, evaluate, and recommend appropriate actions or approvals for VA amendment requests or inquiries related to a permit issued under the VA MML ~~license~~.

#### 2. TRAINING ACTIVITIES

##### a. Required Initial Training

###### (1) Self-study

(a) VA MML (including items incorporated into the MML by reference such as VA license application and supplements, NRSC charter and delegation of authority, VHA-NRC Letter of Understanding, and SOPs), NHPP procedural guidelines, lessons learned, ~~frequently asked questions (FAQs)~~, NHPP Web site,

(b) VHA ~~D~~irective ~~1105-01~~ or current number (Management of Radioactive Materials)-and handbook,

(c) Applicable parts and sections of the Code of Federal Regulations, Titles 10, 21, and 49,

(d) Applicable NRC Web sites, Regulatory Guides, and other NRC documents,

(e) NRC licensing course handouts,

(f) Industry codes and standards,

(g) OSHA General Industry Training

(gh) Core performance indicators, NRSC files, and program assessment reports,

(hj) Permit control tracking systems, records repository, and other NHPP files and databases, and

(ij) ~~Directed~~ review of prior permitting actions.

(2) On-the-job training by completion of initial permitting actions with quality control review.

##### b. Core Training

Attendance and successful completion of NRC core training courses listed in SOP 4, paragraph 6a or equivalent training courses per SOP 4, paragraph 7.

##### c. Specialized Training

Additional required training beyond, and in addition to, required initial and core training that is based on evaluation of a permit reviewer's prior training and experience. Determined by RCPO on individual basis. Selected from courses in the NRC Inspection Manual, Chapter ~~1248~~1246, and/or other available courses.

##### d. Supplemental Training



Additional required training beyond, and in addition to, required initial and core training that is based on evaluation of a permit reviewer's prior training and experience, possible permitting assignments, and results of quality control evaluation of initial permitting actions. Determined by RCPO on individual basis.

e. Refresher Training

(1) Periodic training provided during NHPP professional staff meetings to address and review permitting actions with emphasis on the following:

- (a) Lessons learned and ~~frequently asked questions~~FAQs,
- (b) Significant permitting actions,
- (c) Benchmarking to industry codes and standards, and professional standards of practice, and,
- (d) Benchmarking to NRC updates or program changes.

(2) Attendance at NRC refresher courses such as H-401 or other courses identified in MC NRC Inspection Manual Chapter 1248, Appendix A, 1246 for permit reviewers.

## SECTION II

### TRAINING REQUIREMENTS - PERMIT INSPECTOR

1. **APPLICABILITY:** The training described below is required for permit inspectors. Permit inspectors conduct routine, reactive, and other inspections at VA medical facilities ~~issued that hold~~ permits issued under the MML.

#### 2. TRAINING ACTIVITIES

##### a. Required Initial Training

###### (1) Self-study

(a) VA MML (including items incorporated into the MML by reference such as VA license application and supplements, NRSC charter and delegation of authority, VHA-NRC Letter of Understanding, and SOPs), NHPP procedural guidelines, lessons learned, ~~frequently asked questions (FAQs)~~, NHPP Web site,

(b) VHA ~~d~~Directive ~~1105-01~~ or current number (Management of Radioactive Materials) and handbook,

(c) Applicable parts and sections of the Code of Federal Regulations, Titles 10, 21, and 49, and 261,

(d) Applicable NRC Web sites, Regulatory Guides, and other NRC documents,

(e) NRC inspection course handouts,

(f) Industry codes and standards,

(g) Core performance indicators, NRSC files, and program assessment reports,

(h) Permit control tracking systems, records repository, and other NHPP files and databases, and

(i) Directed review of prior inspection actions.

(2) On-the-job training by completion of three accompanied inspections with at least one management accompaniment.

##### b. Core Training

Attendance and successful completion of, NRC core training courses listed in SOP 4, paragraph 6a or equivalent training courses per SOP 4, paragraph 7.

##### c. Specialized Training

Additional required training beyond, and in addition to, required initial and core training that is based on evaluation of a permit inspector's prior training and experience. Determined by RCPO on individual basis. Selected from courses in the NRC Inspection Manual, Chapter ~~1246~~ 1248, and/or other available courses.

##### d. Supplemental Training



Additional required training beyond, and in addition to, required initial and core training that is based on evaluation of a permit inspector's prior training and experience, possible inspection assignments, and results of accompanied inspection. Determined by RCPO on individual basis.

e. Refresher Training

(1) Periodic training provided during NHPP professional staff meetings to address and review inspection actions with emphasis on the following.

- (a) Lessons learned and ~~frequently asked questions~~FAQs,
- (b) Significant inspection and enforcement actions,
- (c) Benchmarking to industry codes and standards, and professional standards of practice, and
- (d) Benchmarking to NRC updates or program changes.

(2) Attendance at NRC refresher courses such as H-401 or other courses identified in MC NRC Inspection Manual Chapter 1248, Appendix B, 1246 for permit inspectors.



## APPENDIX B

### QUALIFICATION JOURNALS

This appendix has two qualification journals. The first qualification journal is for professional staff members who complete permit reviews. The second qualification journal is for professional staff members who conduct permit inspections.

The following acronyms are used in this appendix.

NHPP	—National Health Physics Program
NRC	—Nuclear Regulatory Commission
NRSC	—National Radiation Safety Committee
OSHA	<u>Occupational Safety and Health Administration</u>
RCPO	—Radiation Control Protection Officer
SOP	—Standard Operating Procedure
VA	—Department of Veterans Affairs
VHA	—Veterans Health Administration

The permit reviewer or permit inspector completes the column “completion date initials” to document completion of the individual training elements. The RCPO completes the column “assessment date initials” to document assessment of the training element. The RCPO completes the recommendation section below the table.

The qualification journal must be completed for initial or interim qualification. A new journal must be completed to document qualification for a permit reviewer or permit inspector who was previously in the interim qualification status.

PERMIT REVIEWER QUALIFICATION JOURNAL

Permit reviewer: (~~list full~~ name)

Training Element	Completion Date Initials	Assessment Date Initials
<b>Required Initial Training</b>		
VA MML (including items incorporated by reference) license application, SOPs, NHPP procedural guidelines, lessons learned, FAQs, Web site		
VHA Directive <del>1105-01</del> (or current number) and handbook		
Code of Federal Regulations, Titles 10, 21, and 49		
NRC information and licensing course handouts		
Industry codes and standards		
OSHA General Industry Training		
Core performance indicators, NRSC files		
Tracking systems, records repository, and databases		
Review of permitting actions		
On-the-job training with quality control reviews		
<b>Core Training</b>		
G-109 licensing		
<del>G-111 OSHA</del>		
G-205 root cause/incident investigation		
H-201 advanced health physics		
H-304 nuclear medicine		
H-308 transportation		
H-313 teletherapy and brachytherapy and gamma knife		
S-201 materials control and security		
<b>Specialized Training</b>		
(determined by RCPO)		
<b>Supplemental Training</b>		
(determined by RCPO)		
<b>Refresher Training</b>		
(determined by RCPO)		
<b>Qualification Board</b>		
(determined by RCPO)		

Recommendation: [ ] Qualified- [ ] Interim qualified ~~ification~~ with limitations listed below

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| Department of Veterans Affairs      VHA NRSC SOP 04: – NHPP Inspector/Permit Reviewer  
Qualifications

| Veterans Health Administration  
Washington, DC 20420

Revision date: July X, 2015 (proposed)

| \_\_\_\_\_  
RCPO (printed name, signature, and date)

**PERMIT INSPECTOR QUALIFICATION JOURNAL**

Permit reviewer: (~~list~~ full name)

Training Element	Completion Date Initials	Assessment Date Initials
<b>Required Initial Training</b>		
VA <u>MML (including items incorporated by reference), license application, SOPs, NHPP procedural guidelines, lessons learned, FAQs, Web site</u>		
VHA <u>Directive 1105.01 (or current number) and handbook</u>		
Code of Federal Regulations, <u>Titles 10, 21, and 49</u>		
NRC information and inspection course handouts		
Industry codes and standards		
<u>OSHA general Industry Training</u>		
Core performance indicators, NRSC files		
Tracking systems, records repository, and databases		
Review of inspections and enforcement actions		
Accompanied inspections - 3 ( <u>includes 1 mgt accomp</u> )		
<b>Core Training</b>		
G-101 or 108 inspections		
<del>G-111 OSHA</del>		
G-205 root cause/ <u>incident investigation</u>		
<del>G-304 inspecting for performance</del>		
H-201 health physics		
H-304 nuclear medicine		
H-308 transportation		
H-313 brachytherapy <u>and gamma knife</u>		
S-201 materials control and security		
OP <u>effective communication for inspectors</u>		
<b>Specialized Training</b>		
(determined by RCPO)		
<b>Supplemental Training</b>		
(determined by RCPO)		
<b>Refresher Training</b>		
(determined by RCPO)		
<b>Qualification Board</b>		
(determined by RCPO)		

Recommendation:    ☐ Qualified    ☐ Interim qualified with limitations listed below



Department of Veterans Affairs      VHA NRSC SOP 04: – NHPP Inspector/Permit Reviewer  
Qualifications  
Veterans Health Administration      Revision date: July X, 2015 (proposed)  
Washington, DC 20420

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\_\_\_\_\_  
RCPO (printed name, signature, and date)

## **Enclosure 2**

### **Specific Courses Requested for Equivalency**

The following sections compare the proposed equivalent courses with the NRC courses. Course descriptions and outline information are from the provider's Web page or training materials collected by course attendees with source information indicated in table notes.



1. 2-Day TapRoot® Incident Investigation and Root Cause Analysis Course (System Improvements, Inc.) as equivalency for NRC G-205 Root Cause Workshop.

NRC G-205 Root Cause Workshop	TapRoot® Incident Investigation and Root Cause Analysis Course®
<p><b>Course Description:</b> This workshop provides attendees with an introduction to root cause analysis [RCA], events and causal factors analysis, interviewing witnesses, failure recognition and analysis, change analysis, energy (hazard)-barrier-target analysis, analytical trees, personnel reliability, MORT analysis, assembling facts and conclusions and building a defensible argument (oral briefing). Emphasis is placed on conducting information gathering interviews; model videotapes are used to illustrate specific interviewing techniques. Case studies are used to illustrate methods, foster teamwork, and practice interviewing and briefing techniques.</p> <p><b>Course outline:</b></p> <ol style="list-style-type: none"> <li>1. Welcome</li> <li>2. Initiating the RCA</li> <li>3. RCA Techniques</li> <li>4. Event and Causal Factor Analysis</li> <li>5. Fact-Finding Techniques</li> <li>6. Fault-tree analysis</li> <li>7. Pareto Analysis</li> <li>8. The Five-Whys</li> <li>9. The Critical technique</li> <li>10. Barrier Analysis</li> <li>11. Management and Oversight Risk Tree</li> <li>12. Advanced Interviewing</li> <li>13. Case Study Summaries</li> </ol>	<p><b>Course Description:</b> TapRoot® is a systematic process, software, and training for finding the real root causes of problems. It is used by leading companies around the world to investigate and fix the root causes of major accidents, everyday incidents, minor near-misses, quality issues, human errors, maintenance problems, medical mistakes, productivity issues, manufacturing mistakes, environmental releases ... in other words, all types of mission-critical problems.</p> <p>TapRoot® Techniques are designed for everyone from beginner to expert. In course, you learn the TapRoot® Essentials to find and fix the root causes of incidents, accidents, quality problems, near-misses, operational errors, hospital sentinel events, and other types of problems. The essential TapRoot® Techniques include:</p> <ul style="list-style-type: none"> <li>• SnapCharT® – a simple, visual technique for collecting and organizing information to understand what happened.</li> <li>• Root Cause Tree® – a systematic, repeatable way to find the root causes of human performance and equipment problems — the Root Cause Tree® helps investigators see beyond their current knowledge.</li> <li>• Corrective Action Helper® – help lead investigators “outside the box” to develop effective corrective actions.”</li> </ul> <p>Course outline:</p> <ol style="list-style-type: none"> <li>1. Class Introductions and Background of TapRoot®</li> <li>2. SnapCharT® Basics</li> <li>3. SnapCharT® Exercise</li> <li>4. Define Causal Factors</li> <li>5. Intro to Root Cause Tree® &amp; Software</li> <li>6. Find Root Cause Example – Instructor Uses TapRoot® Software</li> <li>7. Root Cause Tree® Exercise – Participants Use TapRoot® Software or Paper System</li> </ol>

	<ul style="list-style-type: none"> <li>8. Generic Causes</li> <li>9. Corrective Actions</li> <li>10. Corrective Actions Exercise</li> <li>11. Proactive TapRoot®</li> <li>12. Proactive TapRoot® Exercise</li> <li>13. Presenting to Management</li> <li>14. Frequently Asked Questions</li> <li>15. Website and Blog</li> <li>16. TapRoot® and Software Overview</li> <li>17. Final Team Exercise: Draw a SnapCharT®</li> <li>18. Find Causal Factors, Root Causes, Generic Causes &amp; Develop Corrective Actions</li> <li>19. Participants Present Analyses to Instructors and Class – Exercise Critique and Wrap Up</li> </ul>
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References for course descriptions/outline.

NRC

Description: [http://nrc-stp.ornl.gov/asletters/training/agreement\\_state\\_course\\_descriptions.pdf](http://nrc-stp.ornl.gov/asletters/training/agreement_state_course_descriptions.pdf)

Outline: [http://nrc-stp.ornl.gov/asletters/training/g-205\\_root\\_cause\\_workshop.pdf](http://nrc-stp.ornl.gov/asletters/training/g-205_root_cause_workshop.pdf)

TapRoot: <http://www.taproot.com/courses#2-day-incident>



2. Oak Ridge Associated Universities (ORAU) "Introduction to Radiation Safety" (40-hr) course and "RSO Training" (40-hr) courses (i.e., both courses combined) as equivalency for H-201. Advanced Health Physics (NRC) (formerly named Health Physics Technology).

NRC H-201 Advanced Health Physics	ORAU Health Physics Courses
<p><b>Course Description:</b>          "This course covers the last two weeks in a 5-week series of Health Physics courses. This intensive 10-day course provides a detailed understanding of health physics principles. The course includes discussions of external dose topics such as dose limits; radioactive decay and serial decay; specific activity; neutron activation; point, line and area source equations; mean life; shielding; skin dose; instruments; effective dose equivalent; submersion dose; health physics statistics and atmospheric dispersion as well as internal dose topics such as effective half-life; an overview of ICRP-26/30 internal dose concepts including the lung model; particle size; the methodology of EPA Federal Guidance Report No. 11; the use of 10 CFR Part 20 Appendix B; the MIRD methodology; the evaluation of embryo/fetal doses; air sampling; bioassay and the use of intake retention fractions."</p> <p><b>Course schedule</b></p> <p><b><u>Week 1</u></b></p> <p><b>Monday</b>          Introduction/Admin          Math Review          HP Review          Radiation History          Dose Quantities and Limits</p> <p><b>Tuesday</b>          Radiation Concepts          X-Rays          Radioactive Decay          Specific Activity          Neutron Activation          Serial Decay Equilibrium          Interactions with Matter</p> <p><b>Wednesday</b>          Quiz 1 and Q&amp;A</p>	<p><b>ORAU Introduction to Radiation Safety (40 hrs) Course Description:</b>          "This five-day lecture/laboratory course is an introduction to the basic science behind radiation safety and to common applications of radiation safety principles. Lectures include a description of common radiation sources, interaction of radiation with matter, biological effects, detection, and measurement. Laboratory exercises emphasize radiation detection and measurement techniques using both fixed and portable instrumentation."</p> <p><b>Tentative course schedule</b></p> <p><b>Monday</b>          Welcome, Registration, Orientation          Introduction to Radioactivity          Dosimetric Quantities and Units          Interactions of Radiation with Matter          Radiation Safety Principles</p> <p><b>Tuesday</b>          Survey Instruments          Lab: GM Detectors          Lab: Survey Instruments          Demo: Cloud Chamber          Lab: Survey Instruments</p> <p><b>Wednesday</b>          Decay rates          Biological Effects of Radiation          Radioactive Waste          Gamma Spectroscopy          Lab: Gamma Spectroscopy</p> <p><b>Thursday</b>          Radiation Safety Regulations          Liquid Scintillation          Lab: Laboratory Techniques and Sample Prep          Lab: Liquid Scintillation          Radiation Surveys          Lab: Contamination Surveys</p>



Interactions with Matter  
Interactions with Matter and Skin Dose  
Gamma Constant  
Point Source Inverse Square

**Thursday**

Problem Session and Q&A  
Line Source (4)  
Area and Volume Source (4)  
Effective Dose Equivalent (5)  
Submersion Dose (5)

**Friday**

Quiz 2 and Q&A  
External Dose Evaluation  
ALARA  
Instruments, Calibration and Surveys

**Week 2**

**Monday**

Problem Session and Q&A  
Internal Dosimetry  
Effective Half-Life and Mean Life  
ICRP-30 and 10 CFR 20  
Lung Model and Particle Size

**Tuesday**

Quiz 3 and Q&A  
EPA FGR 11  
Effluents  
Bioassay and Air Sampling  
MIRD

**Wednesday**

Problem Session and Q&A  
Embryo/Fetal Dose  
Intake Retention Fractions  
IRF  
Contamination

**Thursday**

Quiz 4 and Q&A  
TEDE ALARA  
REMIT and NRC Forms 4 & 5  
Problem Session and Q&A

**Friday**

Final Exam

**Friday**

Air Sampling Introduction  
Lab: Internet Resources  
Shielding Radiation  
Critique and Summary

**-----**  
**ORAU Radiation Safety Officer Training  
(40-hr course) Course description:**

This five-day lecture/laboratory course introduces course participants to relevant issues that influence the effectiveness of a radiation safety program. The course emphasizes a variety of administrative and technical issues that a radiation safety officer has to address. An interactive format offers the opportunity for instructor/group discussions to facilitate the learning process.

**Tentative course schedule:**

**Day 1**

Welcome, Registration, Orientation  
Radiation Sources and Equipment  
Survey Instruments  
Lab: Survey Instruments I  
Lab: Survey Instruments II  
Liquid Scintillation Counting  
Lab: Liquid Scintillation Counting

**Day 2**

Sealed Source Design and Leak Testing  
Sealed Source Leak Testing Lab  
Calibration of Survey Instruments  
Lab: Instrument Calibration - Alpha & Beta  
Lab: Instrument Calibration - Gamma

**Day 3**

Radiation Safety Regulations and Standards  
Radiation Surveys  
Transportation of Radioactive Materials  
Lab: Shipping RAM Packages  
Lab: Receiving RAM Packages  
Challenges for the HP in Radiation Accident  
Management  
Organizational Structure  
Inventory Control and Records  
Security of Radioactive Materials



	<p><b>Day 4</b>  Communications and Training  Inspections and Audits  Lab: Floor Monitoring  Lab: Contamination Surveys  Gamma Spectroscopy Overview  Lab: Gamma Spectroscopy</p> <p><b>Day 5</b>  Radioactive Waste Management  Dosimetry Program Requirements  Emergency Planning  Internet Resources  Critique and Summary</p>
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References:

NRC:

Description: [http://nrc-stp.ornl.gov/asletters/training/agreement\\_state\\_course\\_descriptions.pdf](http://nrc-stp.ornl.gov/asletters/training/agreement_state_course_descriptions.pdf)

Outline: NRC Accession No. ML14160A511

ORAU Introduction to Radiation Safety Course (Description and Outline):

<http://www.ornl.gov/environmental-assessments-health-physics/capabilities/health-physics-training/course-introduction-to-radiation-safety.aspx>

ORAU Introduction to Radiation Safety Officer Course (Description and Outline):

<http://www.ornl.gov/environmental-assessments-health-physics/capabilities/health-physics-training/course-radiation-safety-officer.aspx>

3. Nevada Technical Associates, Inc. (NTS), Transportation and Packaging of Radioactive Materials as equivalency for H-308 Transportation of Radioactive Materials (NRC).

<b>H-308 Transportation of Radioactive Materials</b>	<b>NTS Transportation and Packaging of Radioactive Materials</b>
<p><b>Course Description:</b>            "This course provides an understanding of radioactive material packaging/transport and the role of regulatory agencies and their regulations (Titles 10 and 49 of the Code of Federal Regulations). Topics covered include limited quantities of radioactive material, instruments, and articles, normal and special forms of radioactive materials, low specific activity (LSA), and surface contaminated objects (SCO) for radioactive materials. Basic concepts of package activity limitation, radiation and contamination limits, hazardous materials communications requirements, transportation safeguards, NRC inspection requirements, accident case histories, and emergency response are also covered. In addition to transportation issues, a brief overview of 10 CFR Part 61 waste generator requirements and waste classification system is presented."</p> <p><b>Course outline</b></p> <p><u>Monday</u>            Course and Student Introductions            Transport Safety Regulations            Radioactive Materials Terminology</p> <p><u>Tuesday</u>            Categories of Radioactive Materials                Packages            Transport Controls</p> <p><u>Wednesday</u>            Hazmat Communication and Shipping Requirements            10 CFR Transport Requirements (Part 71, Parts 20 &amp; 37)</p> <p><u>Thursday</u>            Other Requirements            Review Exercise</p>	<p><b>Course Description:</b>            "Our Transportation of Radioactive Materials course is designed for radiation safety officers, safety officers, technicians, managers and others who may be involved in transporting radioactive materials or in preparing radioactive materials for transport. This course will cover the applicable 49 CFR DOT and 10 CFR NRC transportation of radioactive material regulations. The course will cover DOT 49 CFR Parts 170 – 189 with emphasis on Parts 172 – 178 and 10 CFR 71. These regulations cover hazardous material classification, hazardous waste, labeling, types of packaging and containers, packaging and container limits, radiation level standards, and reporting and record keeping requirements. Fissile and Type B materials are not covered in detail."</p> <p>"The course will also cover 10 CFR 61 (NRC Land Disposal of Radioactive Material) and related requirements from 10 CFR 19, 20 and 40. The course includes package and shipping document preparation exercises. Students who complete the course and pass an examination will receive a certificate. This certificate, along with the training manual, should be used by the employer to document the training as required by 49 CFR 172."</p> <p><b>Course Outline</b></p> <p>1. Introduction and Transportation Regulatory Agencies            1.1. Basic philosophy of RAM transportation            1.2. IAEA, ICAO, IATA, DOT, NRC, U.S. Postal Service, State Agencies            1.3. Overview of revised (2004) 10CFR71 and 49CFR170-189            1.4. Overview of IATA Dangerous Goods Regulations (2005)</p> <p>2. Applicability and Limitations            2.1. Definitions</p> <p>3. Classification / Identification            3.1. A1/A2 System</p>



Friday  
Special Topics  
Review  
Exam

- 3.2. Types of Material
- 3.3. Limited Quantities, Instruments, and Articles
- 4. Radiation, Contamination, and Activity Limits
  - 4.1. Limits on Contents
  - 4.2. Limits on Packages
  - 4.3. Limits on Vehicles/Carriers
- 5. Packaging of Radioactive Materials
  - 5.1. Standards for all Packages
  - 5.2. Industrial Packages
  - 5.3. Excepted, Type A, Type B, Fissile
  - 5.4. LSA and SCO
- 6. Markings and Labels
  - 6.1. Marking
  - 6.2. TI
  - 6.3. Hazard Label Categories
  - 6.4. CSI
  - 6.5. Handling Labels
- 7. Carrier Related Requirements
  - 7.1. Exclusive Use
  - 7.2. Placarding
  - 7.3. Route Control
  - 7.4. Advance Notification
- 8. Documents
  - 8.1. Shipping Papers/Manifests
    - 8.1.1. Air Waybills
    - 8.1.2. Dangerous Goods Deceleration
    - 8.1.3. Competent Authority Certificates
  - 8.2. Emergency Response Information
  - 8.3. Reports/Notifications
  - 8.4. Record Retention
- 9. Programs
  - 9.1. Quality Assurance/Control
  - 9.2. Training
  - 9.3. Export Requirements

#### References

#### NRC

Description: [http://nrc-stp.ornl.gov/asletters/training/agreement\\_state\\_course\\_descriptions.pdf](http://nrc-stp.ornl.gov/asletters/training/agreement_state_course_descriptions.pdf)

Outline: [http://nrc-stp.ornl.gov/asletters/training/h-308\\_transportation\\_of\\_ram.pdf](http://nrc-stp.ornl.gov/asletters/training/h-308_transportation_of_ram.pdf)

NTS, Inc. (Description and Outline): <http://www.ntanet.net/transport.html>

CALVIN KIDWELL  
501-257-1571  
VHA NATIONAL HEALTH PHYSICS PR  
2200 FT ROOTS DR B101 R208D  
NORTH LITTLE ROCK AR 72114

0.3 LBS LTR

1 OF 1

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NUCLEAR REGULATORY COMMISSION  
STE. 210  
2443 WARRENVILLE RD.  
LISLE IL 60532-4352



**IL 603 9-03**



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**1**



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Reference # 1: CK

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