

May 4, 1998

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: GUIDELINES FOR PROVIDING ASSISTANCE TO AGREEMENT STATES AND ALTERNATIVES FOR TRAINING

PURPOSE:

To provide the Commission with the information requested in COMSECY-97-275 regarding the feasibility of off-site training alternatives.

BACKGROUND:

The Commission has considered the issue of NRC funding of Agreement State training since 1995 through SECY-95-017, SECY-95-192, COMSECY-96-054, SECY-97-183, SECY-97-275 and associated Staff Requirements Memoranda (SRM). The Commission directed that this issue be included under Direction Setting Issue 4 (DSI-4), "NRC's Relationship with Agreement States."

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The Commission has established the policy that the NRC will no longer pay travel and per diem expenses for the Agreement States, except where the Agreement State has met the criteria for establishing financial hardship (SRM-SECY-97-183). The Agreement State may attend NRC training courses, by paying tuition and travel expenses and receiving the same priority as NRC staff, or by paying travel expenses and attending on a space available basis. Agreement States qualifying under the hardship criteria would attend on a space-available basis with assistance from NRC for travel and tuition expenses. The consideration of alternatives for training in SECY-97-275 mainly addressed NRC costs and expenditures. By adding flexibility to the presentation of the training program, some significant cost savings could be realized by the Agreement States with minor cost expenditures by NRC or at no additional cost to NRC. Therefore, the Commission, in SRM-SECY-97-275, directed the staff to address the following issue:

The staff should explore, as appropriate, the off-site training alternative, in particular, locations in Agreement States, and report their findings to the Commission for consideration. (In the context of this SRM, off-site refers to training sites other than its current normal locations in the TTC, NRC headquarters or regional office, or NRC contractor's office.)

DISCUSSION:

In exploring the off-site training alternative, staff evaluated the current and historic training methods used by NRC or the States to provide the basic qualifications for their staff. The methods considered in this paper focused on the traditional classroom presentation mode since other alternative presentation modes were discussed in SECY-97-275. These methods include:

- Method 1.** Training provided by NRC using dedicated staff and NRC facilities, or NRC contractors and their facilities;
- Method 2.** Regional training sponsored by NRC;
- Method 3.** Relocating existing training courses to Agreement States;
- Method 4.** Training provided by State instructors;
- Method 5.** Commercially available courses;
- Method 6.** Obtaining training via contractor (at the contractor's facilities or at remote sites); and
- Method 7.** Training agreements with local universities and colleges.

The effectiveness of these methods varies as does the cost. **Method 1** listed above covers courses presented at the NRC Technical Training Center (TTC) located in Chattanooga, Tennessee, or at NRC contractor facilities. However, where feasible, NRC training has been made available at sites remote from the TTC, specifically at Regional Offices or Rockville, Maryland (**Method 2**). The criteria used for determining whether a course may be mobile and available for presentation at a remote site are:

1. The course is not constrained to a specific location due to the requirement for specialized facilities.
2. The host organization requests the relocation with sufficient lead time to permit advertising the course for the benefit of other attendees.
3. The host organization guarantees a minimum number of students.

4. The host organization provides logistical support and makes all arrangements for the training facility, equipment and sites for field trips or "hands-on" exercises, if applicable.
5. Availability of instructors.

Examples of courses which have been presented at multiple locations include the NRCs 10 CFR Part 20 Training, Internal Dosimetry, Introductory Health Physics, Health Physics Topical Review, Licensing Practices and Procedures, and Inspection Procedures Courses. Agreement States have been invited to attend these remote sessions. In addition, special training workshops have been held in the following areas: Investigations Workshop in Sacramento, California, Nuclear Materials Events Database (NMED) Workshop in Rockville, Maryland, individual State onsite NMED help sessions, Sealed Source & Device (SS&D) Workshops in Rockville, Maryland, and Financial Assurance Workshop also in Rockville, Maryland.

These same criteria would apply equally to requests for relocation of training to an Agreement State (**Method 3**). In fact, these criteria have been employed in support of requests from Agreement States and States which have filed letters of intent to become Agreement States. Recent requests received from the Commonwealth of Pennsylvania and the State of California were approved in November 1997, prior to receipt of the SECY-97-275 SRM. Three courses (Inspection Procedures, Licensing Practices and Procedures, and Transportation of Radioactive Material) will be conducted in Pennsylvania and two courses (Inspection Procedures and Transportation of Radioactive Material) in California during FY 1998.

Most courses taught by in-house resources (i.e., NRC instructors) and some taught by contractors are capable of being conducted in Agreement States under the criteria stated above. However, current training contracts do not address remote training. To accommodate such requests, contract modifications would need to be initiated. These requests for modifications would be subject to contractor approval and could involve increased costs not reflected in the current budget. In addition, some courses are contractually tied to a specific location due to the need for access to specialized facilities. In those cases, as contracts expire, new Statements of Work could be written to incorporate the possibility of conducting the training at remote locations where adequate facilities can be provided by the host State.

If a State develops their own training program in totality or in part, it could develop in-house training courses (**Method 4**), use commercially available training courses (**Method 5**), initiate contracts for training (**Method 6**), and establish agreements with local colleges and universities (**Method 7**). The NRC has provided each State with a summary of the "essential elements" of six of the major NRC training areas. These "essential elements" can be used to evaluate commercially available courses, and college and university courses, for equivalency to NRC provided training. In addition, copies of NRC course manuals have been provided to the States which have requested them. These manuals can be used to generate equivalent training either in-house or through arrangements with contractors or local educational institutions.

All of these methods involve some cost either to NRC or the Agreement States, either financial costs or in terms of dedicating personnel resources. The issues involved in evaluating the above methods are discussed in greater detail in the attachment.

The fundamental objective is to ensure quality training in a timely manner to promote regulatory effectiveness. The quality and effectiveness of training provided to both NRC and State inspectors and license reviewers, whose primary responsibility is the health and safety of the public and protection of the environment, cannot be compromised. The Agreement States, by accepting the authority and taking on the responsibility to regulate the possession and use of nuclear materials, are also responsible for ensuring that they have a sufficient number of and adequately trained staff. The Agreement States are responsible for ensuring the quality of the training their staff receive and the cost of that training.

The staff effort to accommodate Agreement State requests for relocation of certain training courses does not require an Information Technology (IT) investment by NRC, and, therefore, does not require a business case assessment by the Chief Information Officer. However, the Office of the Chief Information Officer (OCIO) in coordination with the Office of Human Resources (HR) and the Office for Analysis and Evaluation of Operational Data (AEOD) will continue efforts to assess the business case for future investments in alternative training where IT is involved as requested by the Commission in SRM-SECY-97-275.

RECOMMENDATIONS:

The staff recommends that the Commission:

Endorse the current staff approach (**Methods 1, 2, and 3**) to:

- a. Continue to conduct most in-house courses and some contracted courses at remote locations when requested in advance, provided instructors are available, existing contracts permit the relocation, and the host organization is able to guarantee a minimum number of attendees, adequate facilities and logistical support;
- b. Continue to evaluate all requests to relocate training on a case-by-case basis using the stated criteria. All reasonable requests for which personnel resources and funding are available will be supported; and
- c. Ensure that future NRC training contracts address the possibility of remote training provided that a host State can furnish adequate facilities and logistical support for classroom instruction, field trips, and hands-on exercises, where applicable.

Acknowledge that, having been provided copies of requested NRC course manuals and lists of "essential elements", States which elect not to attend NRC provided training are responsible for developing necessary training and qualification programs for their staff at the State's expense. Methods include: (a) development of equivalent courses in-house, or (b) selection of equivalent commercially available courses, or (c) making arrangements for presentation of equivalent training through contractors or local educational institutions. (**Methods 4, 5, 6, and 7**)

RESOURCES:

Method 3 may involve some increased cost to the NRC as a result of requiring NRC contractors to provide training at locations remote from their home base or standard location of presentation. The additional cost for five of the eight courses identified in Attachment 1 as potentially mobile courses is estimated to be \$15K total additional cost. This cost is based on \$3K per contracted course that is relocated to an Agreement State. To address the estimated increase in contractor costs, the pro rata tuition charge, that will be paid by the States that want to guarantee a space in the course, will be adjusted to reflect this increased cost. The other three courses identified are NRC taught, and, therefore, they do not require any additional resources. The staff estimated that one of each of the courses each year would be moved. Costs associated with travel of NRC instructors would likely be unchanged since, depending on the location, some instructors might be required to travel less while others more. However, an increase in NRC travel costs cannot be ruled out. Costs would decrease for the States in which the training is provided but could increase for other States attending that same training. This would address the case where there is a high training need in a State or region of the country and where there would be significant cost savings for the State or States within a region with minimal cost to NRC. This would provide the lowest cost overall considering the combined costs of NRC and the Agreement States.

Methods 4, 5, 6 and 7 would involve no cost to the NRC since all arrangements would be made by the States. **Method 4** would involve minimal cost to the States, other than the loss of some staff availability to complete license reviews and inspections due to the time necessary to develop and conduct training. However, costs associated with **Method 7** are unpredictable since some local educational institutions might elect to adopt reciprocal agreements with States (i.e., providing training in exchange for some service) while others might impose a tuition type fee. The costs to the States associated with **Methods 5 and 6** would be essentially the same as those currently incurred by the NRC. These costs are not insignificant since commercial courses, even if presented at a local site, and contracted training are both typically expensive (\$20K to \$30K).

AEOD budgeted resources for FY 1998 and beyond are sufficient to continue the current policy of offering courses taught by in-house personnel at remote locations when requested. **Method 3** would involve minor increased cost (about \$3K per course) for contractor travel and course relocation. This can be accommodated within existing funding by reprogramming.

COORDINATION:

The Office of General Counsel has no legal objection to this paper. The Office of the Chief Financial Officer has no objection to the resource estimates contained in this paper. The Office of the Chief Information Officer has no objection to the information technology needs discussed in this paper.

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Attachment: Criteria for Off-Site Training Alternatives

ATTACHMENT

CRITERIA FOR OFF-SITE TRAINING ALTERNATIVES

OVERVIEW

The Technical Training Division (TTD) of the Office for Analysis and Evaluation of Operational Data (AEOD) provides training primarily for NRC Headquarters and Regional staff, Agreement State regulatory personnel, and individuals from a non-Agreement State which has filed a letter of intent to become an Agreement State.

Training is provided either by NRC staff or by contractors. For contracted courses, a tuition charge exists which covers the pro-rated cost of the course for each slot available. States wishing to guarantee slots in contracted courses are required to pay the tuition charge. Alternatively, States may attend any NRC sponsored course without charge on a "space available" basis. Training, on a "space available" basis, is also provided to individuals from other Federal Agencies, non-Agreement States and representatives from Foreign Regulatory Agencies. Personnel from NRC, Agreement States and States which have filed a letter of intent to become Agreement States generally have priority for all slots in NRC sponsored training courses.

NRC personnel register for training directly with the TTD while the Office of State Programs (OSP) acts as the focal point for State registrants. NRC training requirements are specified in Inspection Manual Chapter (IMC)1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." Many Agreement States do not currently have detailed, documented, training requirements equivalent to IMC1246 but are working towards that end. An Agreement State must have a documented training and qualification program equivalent to IMC1246 in order to be eligible for NRC funding assistance for travel associated with training.

CURRENT TRAINING LOCATIONS

Table 1 provides a listing of the primary courses attended by both NRC and Agreement State materials inspectors and license reviewers. As can be seen from Table 1, very few of the Materials Program training courses are conducted at the NRC Technical Training Center (TTC) in Chattanooga, Tennessee. In fact, only 4 of the 17 courses listed have been recently presented at the TTC.

Of those four courses, one has been conducted at remote NRC locations for the last three years. Two of the remaining three have previously been presented at various non-NRC locations around the country, and, in FY 1998, these two courses are being conducted in three different States located in three different regions of the country (south, north and west). Thus, of the 17 courses listed, only one has been presented exclusively at the TTC.

TABLE 1 - NRC Sponsored Training Courses

Course	Title	Standard Location	Potential Location
G-108	Inspection Procedures	Chattanooga, TN	Anywhere
G-109	Licensing Practices and Procedures	Chattanooga, TN	Anywhere
G-205	Root Cause/Incident Investigation Workshop	Regions	Anywhere
G-304	Inspecting for Performance - Materials Version	Regions	Anywhere
H-109	Applied Health Physics	Oak Ridge, TN	Contractor Location (N/R)
H-111	Environmental Monitoring for Radioactivity	Oak Ridge, TN	Contractor Location (N/R)
H-117	Introductory Health Physics	Rockville, MD	Anywhere
H-119	Air Sampling For Radioactive Materials	Oak Ridge, TN	Contractor Location (N/R)
H-120	Radiological Surveys in Support of Decommissioning	Rockville, MD	Anywhere
H-201	Health Physics Technology	Chattanooga, TN	Chattanooga, TN
H-304	Diagnostic and Therapeutic Nuclear Medicine	Houston, TX	Contractor Location (N/R)
H-305	Safety Aspects of Industrial Radiography	Niantic, CT	Contractor Location (N/R)
H-308	Transportation of Radioactive Materials	Columbia, SC	Anywhere
H-312	Internal Dosimetry and Whole Body Counting	Chattanooga, TN	Anywhere
H-313	Teletherapy and Brachytherapy	Houston, TX	Contractor Location (N/R)
H-314	Safety Aspects of Well Logging	Houston, TX	Contractor Location (N/R)
H-315	Irradiator Technology	Montreal, Canada	Contractor Location (N/R)

TABLE "Standard Location" is where course has been typically conducted.

NOTES: "Potential Location" indicates where it is feasible to conduct the course.

"N/R" indicates the location is not relocatable due to special facility/activity requirements

"Anywhere" means any reasonable location is feasible considering such factors as the travel distance for the majority of attendees, the season of the year and the availability of facilities and airports. Additional logistical and possibly contractual problems may limit options or might even dictate a specific location.

"Contractor Location" depends on the contractor. When a new contract is awarded, the location may change. However, if there is a requirement for field activities, any alternate remote location will need to take into consideration the contractors capabilities and limitations.

CRITERIA FOR RELOCATION OF TRAINING

To be eligible for presentation at a remote location, such as in an Agreement State, the following criteria must be addressed:

1. The course is not constrained to a specific location due to the requirement for specialized facilities. This is particularly applicable to the "materials technology" courses, i.e., courses which provide the students with an understanding of licensee operations. For example, the Industrial Radiography Course teaches the students how Industrial Radiography is performed including an understanding of the facilities, equipment and procedures used as well as the terminology. To be effective, such courses require the availability of appropriate facilities and functioning equipment which comply with the regulations and can be operated by the instructors during demonstrations and also by the students themselves to obtain first hand knowledge of what licensees do and the procedures they follow. These field exercises have always been the highlight of NRC sponsored courses. Student feedback is unwaveringly positive on the usefulness of these activities. In many

cases, the only way to arrange for such facilities is to contract with organizations which have operational facilities and equipment or organizations with dedicated training facilities. As a result, contracts typically specify a unique location where the course must be conducted.

2. The request must be received with sufficient lead time.

The date and location of the course are advertised in the TTD Course Catalog and on the TTD web page. This information must be established well in advance to allow interested parties (NRC or State) enough time to make the necessary arrangements. NRC personnel for whom the training is required by IMC 1246 must coordinate with their management to insure that individual and Branch work plans are adjusted and the inspection schedule is not adversely impacted. The TTD catalog is typically updated before the beginning of each new fiscal year and training course dates and locations provided for the next two fiscal years. If circumstances dictate, locations may be changed after the information is published since this will only effect travel costs. However, course dates should not be changed to avoid interfering with pre-programmed NRC and State mission requirements.

3. The host organization guarantees a minimum number of students.

Since it cannot be initially predicted how many attendees would be willing to travel to any given site, the host State must justify a request to relocate training by guaranteeing a minimum number of students either exclusively from their own State or in combination with neighboring States. The minimum number of students required to conduct a course would be one-half of the total available slots. As other attendees register for the training, the host State could reduce its participation accordingly if, for example, the number initially proposed would result in a significant impact on their program were they all to attend training simultaneously. However, if the intent is to reduce travel expenditures, then the host State would be wise to register the maximum number possible since the likelihood of the course returning soon to the same State would be small. As would be the case for any course, even one conducted at the TTC, if the total enrollment drops below one-half, the course is subject to cancellation. Such decisions are made approximately eight weeks before the start of the course to provide the individuals affected an opportunity to register for a future presentation and revise work schedules accordingly.

4. The host organization makes all arrangements for the training facility and equipment, provides logistical support, and arranges for sites for field trips or "hands-on" exercises, if applicable.

If a State offers to host a course, it must provide facilities which are conducive to training, equipment which is needed by the instructors to present the classroom lectures and logistical support for the students and the instructors. For some courses, arrangements might also have to be made for visits to field sites or observation of licensee activities.

5. Availability of Instructors.

Instructors for in-house courses can be directed to travel to almost any location provided funds are available. However, many of the instructors are guest lecturers from the Regions and not dedicated professional trainers assigned to the TTD. Thus, their participation is at the discretion of Regional management who must adjust work schedules and budget for expenses. Depending on the location or time period requested, management could decline to permit their inspectors or license reviewers to participate. Such participation by Regional staff is essential because the students must be exposed not only to the theoretical aspects of whatever subject is being covered but also the practical aspects which can only be obtained from inspectors and license reviewers currently engaged in those activities. The use of alternate guest instructors (including personnel from the States) is possible provided they too have the full support of their management. As with NRC guest instructors, it would be necessary to ensure that State volunteers possess the requisite knowledge and the ability to communicate that knowledge. Not all qualified individuals make good teachers. Once identified, those individuals must be willing to devote considerable time to preparation for training, travel and presentation of the lectures. This situation already exists, since an Agreement State inspector has been providing guest lectures during an NRC training course for many years.

APPLICATION OF THE CRITERIA

Considering the above criteria, only the first criterion is dependent on the structure and material presentation of the course content. The remaining criteria address the willingness of the host State to provide the necessary support and the availability of volunteer instructors.

Of the 17 courses, eight devote a significant portion of the class schedule to site visits, demonstrations and/or "hands-on" practical exercises. These include:

- The two medical courses (H-304 and H-313) which involve field trips to local hospitals to tour nuclear medicine departments, teletherapy and brachytherapy facilities, provide demonstrations of routine activities, and allow students to perform some simple procedures.
- The Industrial Radiography Course (H305) which provides the students with an opportunity to tour a shielded facility, perform radiography using actual industrial radiographic equipment and participate in simulated source retrieval operations using low activity sources.
- The Well Logging Course (H-314) in which the students visit an operating oil drilling site, manipulate well logging tools and simulated sources.
- The Irradiator Technology Course (H-315) in which the students tour a megacurie Co-60 irradiator facility, operate the equipment, check safety systems and observe actual operations.

- The three courses presented by the Oak Ridge Institute for Science and Education (ORISE) (H-109, H-111 and H-119) which make extensive use of laboratory radiation counting equipment and provide students with opportunities to collect and analyze soil, water and air samples from contaminated sites.

As a result, these eight courses are not currently available for remote presentation. Of the remaining nine courses, the following three have some restrictions that must be addressed before they can be moved to remote locations:

- The Transportation Course (H-308) involves a field trip to a facility that transports radioactive material. However, such facilities are relatively common so that this activity could be arranged by the host State under criterion 4.
- The Inspection Procedures Course (G-108) involves an exercise which uses four separate locations to simulate a contaminated laboratory and three offices. These activities could be accommodated by the host State under criterion 4.
- The Health Physics Technology Course (H-201) is two weeks in duration unlike the other courses which are one week or less. It is taught by all three health physicists assigned to the NRC's Technical Training Center. The course involves daily quizzes, instrumentation demonstrations and the use of training aids which would be difficult to transport to a remote site. Since this is the most challenging course in the materials curriculum, current plans are to continue presenting the course at the TTC.

The remaining six courses (G-109, G-205, G-304, H-117, H-120 and H-312) involve almost exclusively classroom presentation which can be accomplished at any reasonable host location.

The ability to relocate any of the courses identified above will depend on applicability of the remaining criteria. Requests would be evaluated on a case-by-case basis.

CURRENT COURSE ATTENDANCE

NRC sponsored courses conducted at remote locations are typically held at NRC Headquarters, Regional Offices or at contractors' facilities. All special requests, including requests to relocate training to an Agreement State, are considered on a case-by-case basis to determine if the training can be provided effectively within budget restraints.

Many States have internal policies that impose restrictions on, but usually do not prohibit, the expenditure of State funds for out-of-State travel. Thus, preference might be afforded to attending training in a city at the opposite end of a given State over training conducted across a State border. As a result, State policies restricting out-of-State travel, whether it be to an NRC location or to another State, are a potential self imposed impediment to providing training for the Agreement States.

However, despite the existence of the above mentioned State restrictions on out-of-State travel, the change in NRC policy eliminating funding for Agreement State travel and per diem does not appear to have had a significant impact on the Agreement State training statistics when looked at in the aggregate. However, some individual Agreement States, such as Texas and New Mexico, for example, currently have no funding for training addressing their Agreement State regulatory program. Overall, Agreement State personnel have always comprised the majority of attendees. After a slight decrease in both the number of courses and the percentage of Agreement State attendees in FY 1997 (following the announcement of the new NRC funding policy), the percentage of Agreement State attendees in FY 1998 has increased over that in FY 1997 .

Five of these courses have been conducted so far in FY 1998. One at the TTC in Chattanooga, Tennessee, three at contractors facilities in Houston, Texas, and the fifth in Pittsburgh, Pennsylvania. Seventy-six percent of the participants represented Agreement States and 63% of them were from out-of-State.

For the courses already presented in FY 1998, the only course, whose location was changed, was done so at the request of a non-Agreement State which has filed a letter of intent to become an Agreement State. This type of State will naturally have a large number of individuals who need training (virtually their entire staff). Later this fiscal year, there are two additional courses scheduled for presentation in Pennsylvania, as well as, two courses scheduled for presentation in California. It is impossible to predict how many attendees would be expected from an established Agreement State, with normal personnel turnover, if a course were held in that State. As a result, no definitive conclusion can be drawn from this limited sample as to whether relocation of courses at State request will prove to be an efficient use of State and NRC resources. However, continued use of the criteria identified herein will assure any cost increases to NRC are small.