October 7, 1999

FOR: The Commissioners

FROM: William D. Travers /s/
Executive Director for Operations

SUBJECT: LOCATION OF THE NRC'S TECHNICAL TRAINING CENTER AND APPROPRIATE NUMBER OF SIMULATORS

PURPOSE:

The purpose of this paper is to provide the Commission with a recommendation on consolidating agency training resources in the Washington area and the appropriate number of simulators for regulatory and technical training of reactor program staff.

BACKGROUND:

In April 1998, the Executive Council formed a Training Review Group (TRG) to review the agency's training activities in order to identify ways to improve the effectiveness and efficiency of the agency's training function in preparing NRC employees to perform their duties. In its final report issued in September 1998, the TRG proposed seven recommendations. In SECY-98-291, "Plan for Improving the Effectiveness of NRC's Training Programs," dated December 18, 1998, the staff addressed five of the seven recommendations. Recommendations 6 and 7 in the TRG report were "Consolidate Agency training resources in the Washington area" and "Reduce the number of simulators to 1 BWR and 1 PWR," respectively. SECY-98-291 indicated that there were programmatic, financial, infrastructure, staffing, and timing considerations which must be carefully evaluated so that an informed decision could be made on the optimum location of the Technical Training Center and the appropriate number of simulators. This paper provides information on these issues and provides options for Commission consideration.

The NRC's technical training program is managed by the Office of Human Resources (HR). The technical training staff is located at the NRC Technical Training Center in Chattanooga, TN, although it is part of the NRC headquarters (HQ) organization. The TTC provides training to meet the integrated NRC staff needs in the curriculum areas of reactor technology, probabilistic risk assessment, engineering support, radiation protection, fuel cycle, security and safeguards, and regulatory skills. A spectrum of classroom and simulator courses is provided to meet the cumulative regulatory and technical training needs of the NRC headquarters and regional staff.

Formal reactor technical training for NRC staff was initiated in 1972 when the Atomic Energy Commission obtained classroom and simulator training from the General Electric (GE) and Westinghouse reactor vendors. At that time, there was no requirement for licensee site-specific simulators, and nuclear power plant staff were trained using vendor-owned simulators. This arrangement continued until 1974 when the NRC decided to establish an internal training organization and provide the training using NRC staff instructors. A reactor training function was initially established in Bethesda, MD. Simulator time was purchased from the reactor vendors and/or the Tennessee Valley Authority (TVA), and simulator training was conducted using NRC instructors.

NRC mandated site-specific simulators for licensees in 1979. Subsequently, the reactor vendors decommissioned their simulators and dropped out of the simulator training business which made it necessary for NRC to look for alternatives to provide simulator training for NRC staff. In 1980, the Commission approved moving the reactor training organization from Bethesda, MD, to Chattanooga, TN, where it was established as the NRC Reactor Training Center (RTC). As described in SECY-79-622, "Improvements in the Inspection and Enforcement Training Program," the RTC was established in Chattanooga, TN, because of the proximity to simulators and reactor facilities, the perceived ability to attract and retain a highly qualified instructional staff, and the learning environment that could be established by having students attend classes away from their regular job duties.

Although the primary emphasis of the technical training organization continued to be reactor technology training, the RTC role was expanded to include a wide variety of additional curriculum areas to address the varied technical training needs of the NRC technical staff. In 1983, the RTC was redesignated as the Technical Training Center (TTC) to reflect its increasingly more diverse technical training responsibilities.

As utility training demands changed and sufficient time on the TVA simulators became increasingly unavailable, the NRC began acquiring simulators for GE, Westinghouse, Combustion Engineering (CE), and Babcock and Wilcox (B&W) to meet its training needs. The NRC simulation infrastructure was established by purchasing previously used simulators as surplus items from reactor vendors or canceled plants and upgrading them as necessary to meet NRC needs. This resulted in a capital investment of approximately $10M with a replacement cost of approximately $50M, and was the only method by

which the simulation infrastructure could be established within budget constraints. Information on the simulators acquired, used, and disposed of over time is reflected in the following table in addition to the acquisition, moving, and installation costs.

Simulator	Year Acquired	Acquisition, Moving, and Installation Costs	Major Upgrade Costs	Year Disposed
GE BWR/6 (Black Fox)	1986	$2.70M	$573K	1999
Westinghouse (SNUPPS)	1987	$2.16M	$537K	1997
B&W	1988	$1.17M	$524K	N/A
CE	1992	$2.69M	$0K (Part of procurement)	N/A
GE BWR/4 (Shoreham)	1994	$468K	$350K	N/A
Westinghouse (Trojan)	1995	$892K	$350K	N/A

Full-scope control room simulators modeling the GE BWR/4, Westinghouse, CE, and B&W reactor designs are currently installed at the TTC. Since the GE BWR/4 and Westinghouse designs represent the majority of the operating plants in the U. S., a decision to reduce the number of operational NRC simulators would logically retain the GE BWR/4 and Westinghouse designs.

Technical training courses that are dependent on the TTC infrastructure, such as the simulators, are presented at the TTC. Technical training courses that are dependent on specific contractor facilities and specialized equipment are presented at contractor sites. Technical training courses that are not dependent on specialized infrastructure or equipment are routinely presented at locations near the majority of the students (i.e., in NRC headquarters or at a regional office).

Stakeholder views were solicited from program office and regional management and TTC students through written surveys. These views have been incorporated in the appropriate sections of the paper. Attachment 1 provides composite results for the management survey. Attachment 2 provides composite survey results for TTC students. Attachment 3 provides the views of the HR TTC Labor-Management Partnership Committee Labor Partners. Attachment 4 provides additional views of National Treasury Employees Union (NTEU) personnel.

DISCUSSION:

PROGRAMMATIC CONSIDERATIONS FOR NUMBER OF SIMULATORS

Formal training required to support training and qualification programs is provided for certain categories of NRC staff personnel, including reactor inspectors, headquarters operations officers, reactor operator licensing examiners, and TTC instructors. The largest program is Inspection Manual Chapter (IMC) 1245 "Inspector Qualification Program for the Office of Nuclear Reactor Regulation Inspection Program." Two weeks of vendor-specific simulator training are currently required for initial inspector qualification, and two weeks of vendor-specific simulator refresher training are currently required every three years to maintain inspector qualification in the assigned reactor technology. Simulators are also used to support reactor technology classroom courses for each reactor vendor design. Historically, the CE and B&W designs, including their systems design, transient response, and emergency procedures, were deemed to be sufficiently different from the GE and Westinghouse designs that separate vendor-specific simulator training programs were warranted. Attachment 5 provides detailed information on the use of simulators to support the reactor technology training program.

The fixed costs to operate and maintain the CE and B&W simulators have already been reduced to the minimum considered necessary to maintain their availability for training use. The number of students who attend CE and B&W simulator training has averaged 36 per year and 18 per year, respectively, and has generally declined in recent years. The cost per student and the number of students for each reactor technology area for FY 1998 were:

	Westinghouse	GE	CE	B&W
Cost per Student	$2.3K	$3.5K	$5.5K	$18.4K
Number of Students	118	82	31	10

Student comments regarding CE and B&W simulator training were solicited during the 1997 and 1998 CE and B&W cross-training courses. Students were clear in their belief that vendor-specific simulator training is necessary in all PWR designs. Further insights from these student comments can be seen in Attachment 2.

Management stakeholders believe that vendor- and plant-specific knowledge and skills are necessary for successful job performance including the risk-informed baseline inspection program, characterization of the risk significance of inspection findings in the assessment process, and use of risk information matrices for inspection planning. However, they believe that an adequate level of knowledge and skills can be obtained through enhanced classroom training and on-the-job training and that the added value of CE and B&W simulator training is not sufficient in comparison with the relatively high cost per student. Additionally, management stakeholders feel that NRC staff observation of licensee site-specific simulator training can be used to supplement CE and B&W classroom training in the absence of NRC CE and B&W simulators.

PROGRAMMATIC CONSIDERATIONS FOR TTC LOCATION

The primary benefit of the remote location of the TTC is that it provides an environment where all of the students (headquarters and regions) are away from their normal work environment. This lessens job and family pressures and provides an improved learning environment and more available study time for students during the intensive reactor technology training courses. If the TTC were moved to headquarters, management attention and administrative controls would need to be established and implemented to ensure students are not called out of class or otherwise drawn to their normal duties in order to avoid disruptions and maintain the effectiveness of the technical training program. Program office and regional management endorse and would support management controls for this purpose. The possibility of partial day courses would exist if the technical training organization were in headquarters. This would tend to alleviate the problems of class disruption. However, this would require significant curriculum modification and would have to be weighed with consideration of regional needs.

The TTC staff has established and maintained a high quality technical training program from the Chattanooga, TN, location for nearly 20 years. However, relocation of training staff to headquarters with HR management, program offices, and contract management staffs would achieve some effectiveness and efficiencies. Based on stakeholder surveys of agency management, a headquarters TTC location would increase use of simulators and instructors for review and investigation of technical issues, provide better access to program offices for updating training materials and program office subject matter experts' involvement in course development and instruction, and potentially result in more movement of technical staff between program offices and the technical training organization. Since the majority of specialized technical training (i.e., PRA, radiation protection, engineering support) is provided through contracts, the contracting process may gain some efficiency having the TTC project managers and the Office of Administration (ADM) Division of Contracts and Property Management personnel co-located.

A geographically separated workforce is always more difficult to manage, particularly when most of the resources are at the remote location. Application of training provider resources to address multiple training challenges would be more efficient with a geographically centralized training organization. The ability of HR to reprogram staff to address new or changing agency priorities would be enhanced with the training resources geographically consolidated. Additionally, a centrally located headquarters training staff would routinely be more aware of current agency activities and perspectives which could then be more easily incorporated within training courses.

Currently, the regions are the primary users of simulator training in support of formal qualification requirements for reactor inspectors. Regional personnel will have to travel for simulator training whether the TTC is located in Chattanooga or in headquarters. Benefits of a headquarters TTC location for regional staff would be more opportunities to interact and network with NRC management and headquarters personnel. The use of reactor technology training by headquarters offices would most likely increase if the TTC were located at headquarters in that managers would be more likely to encourage their staff to attend training which did not require out-of-town travel. Additional benefits of a headquarters TTC location for headquarters offices would include less travel time and costs and the ability to provide substitute students for last- minute cancellations in courses.

FINANCIAL CONSIDERATIONS FOR TTC LOCATION

The Office of the Chief Financial Officer (OCFO) contracted with Grant Thornton LLP to perform an estimate of the costs of relocating the Technical Training Center and personnel in the vicinity of the NRC headquarters. In addition to estimating the costs of such a move, the analysis included a comprehensive cost estimate for maintaining and operating the TTC in Rockville, MD, versus Chattanooga, TN, as well as preparing a break-even analysis to identify the amount of time it would take the NRC to recoup the relocation costs. Cost models for four separate scenarios were developed based on the number of simulators (i.e., four, three, two, or one) that would hypothetically be moved. Grant Thornton delivered the final report on September 7, 1999. Using the assumptions that are documented in the report, the Grant Thornton report concluded that (1) the cost to the Nuclear Regulatory Commission to establish the Technical Training Center in Rockville, MD, would be between $3.9 million and $4.2 million dependent on the number of simulators being moved; (2) only a small percentage of the cost of establishing the Technical Training Center in Rockville, MD, would be recovered; and (3) there would be no break-even points for any of the scenarios within the ten-year life cycle. Attachment 6 provides a summary of the Grant Thornton cost study.

The methodology and cost variation options used in the Grant Thornton report proved to be sound and valuable in the follow-on process. Data in the Grant Thornton report were utilized by NRC staff to analyze the costs associated with various options beyond those considered in the Grant Thornton report. It would be less costly to operate the technical training function with two simulators either in Chattanooga, TN, or in Rockville, MD, in comparison with the status quo of four simulators in Chattanooga, TN. The cost savings for the Chattanooga, TN, location would principally result from reduced simulator hardware maintenance costs. The cost savings for a Rockville, MD, location would principally result from a reduction in space needed in Rockville, MD, for a simulator training facility since the TTC instructors and the majority of the classrooms could be located within existing space in NRC headquarters.

The Grant Thornton report assumed that 38,000 square feet of space would be necessary in Rockville, MD, for a four simulator facility and 32,168 square feet of space would be necessary for a two simulator facility. Based on further analysis, the staff determined that only 21,000 square feet of space would actually be necessary for a two simulator facility and recalculated the one-time and annual operational costs with the appropriately sized square footage using the Grant Thornton models. This reduction in space rental costs for a Rockville, MD, simulator training facility would result in larger annual operational cost savings than the Grant Thornton report indicated with the original assumptions. Specific cost data for various options are discussed in detail in later sections of the paper.

INFRASTRUCTURE CONSIDERATIONS FOR TTC LOCATION

The staff considered using existing space to accommodate a hypothetical move of the TTC. However, the column spacing every 20 feet in the White Flint complex and the size and required orientation of the simulator control panels and peripherals preclude placement of the simulators within either OWFN or TWFN. The Grant Thornton study determined, however, that office facilities that could accommodate the simulators could be located within five miles of NRC headquarters. Other possibilities include the NRC warehouse, land immediately adjacent to the parking garage entrance to OWFN, and other space as may be available through GSA. A simulator training facility for the GE BWR/4 simulator and the Westinghouse simulator would require approximately 21,000 square feet of space. This facility would also include space for two small classrooms; office space for simulator instructors; office

space for three simulator engineers; and office, work space, and spare parts storage for simulator maintenance technicians.

Office space for 23 TTC staff would be established in the White Flint complex. A total of three technical training classrooms of sufficient size would be established in the White Flint complex. These classrooms could be equipped with audiovisual and multimedia equipment that is currently installed in the classrooms at the TTC. One large technical training classroom has already been constructed in OWFN as part of the ongoing restack effort. The most effective arrangement of geographically consolidated training resources would locate all training classrooms and related space in the vicinity of the existing Professional Development Center. Inclusion of these non-simulator related spaces within the White Flint complex is one key factor in the overall cost computation since no incremental cost would be incurred because the NRC is already paying rent for the space.

STAFFING CONSIDERATIONS FOR TTC LOCATION

The current TTC staffing level is 26 FTE including 22 technical staff, 2 administrative staff, and 2 managers/supervisors. The TTC organization consists of two components, each headed by a chief. The Reactor Technology Training (RTT) component includes the reactor technology instructional staff (12 FTE) and the simulator engineers (3 FTE). The RTT staff primarily develop and conduct reactor technology and regulatory skills training in the classroom and simulators and maintain the simulators and simulation infrastructure. The Specialized Training and Support (STT) component includes senior health physicists (3 FTE), technical training program managers (4 FTE), and the administrative support staff (2 FTE). The STT staff primarily develop and conduct radiation protection and regulatory skills training, manage contracts for a wide range of contracted specialized technical training, and provide administrative support for the TTC and technical training programs. These staff resources have been necessary to develop and implement the technical training required by agency formal training and qualification programs within the nuclear reactor safety, nuclear materials safety, and nuclear waste safety areas.

A formal qualification program is in place to ensure the qualification and competencies of the TTC training staff. This program parallels the programs currently in place for inspectors, operator licensing examiners, headquarters duty officers, and other positions with formal qualification requirements.

Reactor technology instructors have normally qualified in two reactor technologies sequentially. Initial staff qualification in one technology has normally been completed within one year of assignment, and qualification in the second technology has normally been completed within two years of assignment to the TTC. Consistent with other NRC formal qualification programs, the final determination of successful completion of the TTC staff qualification program has been demonstrated by successful completion of an oral qualification board. The qualification program for other TTC technical staff has typically been completed within one year of assignment.

Historically, the TTC workforce has been relatively stable with an average attrition rate of less than one per year. The established process for posting vacant positions and filling them through the normal selection procedures has been adequate to maintain sufficient staffing to meet programmatic needs.

An informal survey of the TTC staff was conducted in FY 1999 regarding projected retirement age and most likely personal decisions for a number of scenarios. This informal survey was conducted to determine personnel impacts as well as staffing problems that might result from geographical relocation of the technical training function. The table below provides information regarding staff age and projected staff retirement dates for calendar year 2001 for scenarios where the TTC remains in Chattanooga, TN, or relocates to headquarters. It should be noted that the retirement data provided are best faith projections provided by the individuals in response to a hypothetical situation and are not firm commitments. This data does not include potential losses of staff who might choose not to move for reasons other than retirement.

Staff Age and Projected Retirements

Calendar Year	**1999**	**2001 (TTC in Chattanooga)**	**2001 (TTC in Headquarters)**
Number > 55	4	10 of 26	10 of 26
Projected Retirements	0	0	8 of 26

The staff believes that at least 8 of 26 positions would be vacated if the TTC staff is moved to headquarters. Significant time would be required to qualify replacement instructors. Although the staff hopes that all current TTC staff members would relocate to headquarters if a decision to relocate the TTC to headquarters were made, some contingency planning was necessary. For planning purposes only, the staff is assuming that 8 TTC staff members would retire based on their own projections and that it would be necessary to overhire and begin the qualification process for the new hires at least one year before a move of the TTC staff is effected in order to maintain technical training program continuity.

TIMING CONSIDERATIONS

In order to maintain the current quantity and quality of technical training, assuming a move of the TTC to the Washington area and the projected simultaneous retirement or resignation of multiple TTC personnel, a plan for overhiring and qualifying replacement staff would have to be developed and implemented at least one year in advance of the move. A plan would also need to be developed and implemented in advance to establish staff offices, headquarters classrooms, and the simulator training facility and to schedule training in the appropriate locations before, during, and after the various pieces of the technical training infrastructure were moved.

It is estimated that at least one year would be necessary to decommission the CE and B&W simulators and to enhance the classroom and on-the-job training to replace the simulator portion of the reactor technology training programs without simulator support. A complete move of the TTC facility and staff to headquarters is projected to take 2 years and 8 months from initial approval and planning to completion. This takes into consideration space procurement, design, and construction as well as simulator disassembly, move, installation, and testing.

The earliest that funding could be budgeted for a move of the TTC through the normal budget process is FY 2002.

OPTIONS:

Options for TTC location and appropriate numbers of simulators are discussed below. These options take into consideration the programmatic, financial, infrastructure, staffing, and timing considerations discussed in the paper. Each option is discussed as a stand-alone option, but Option 3 builds on the logic for Option 2, and Option 4 builds on the logic for Options 2 and 3.

For each option, the one-time costs, 11-year total costs, and net present value of the 11-year total costs are shown in Attachment 7. As indicated in the table of Attachment 7, the 11 year total costs of the options are not significantly different. There is a difference of approximately $3M (3.3%) between the 11-year total costs of the options and approximately $2M (3.5%) in the net present value of the 11-year total costs of the options. Since there are small differences in total costs, the discussion that follows indicates the effectiveness and efficiency improvements while noting the cash outlay benefits associated with each option.

Option 1: Maintain 4 simulators and the whole TTC staff in Chattanooga, TN.

This option represents the status quo. In this option, the GE, Westinghouse, CE, and B&W simulators and the whole TTC staff would remain in Chattanooga, TN. This option would maintain the existing experienced and qualified TTC staff. Maintaining a geographically separated TTC facility and staff, however, does not achieve the effectiveness and efficiency gains desired by management. There would be no one-time costs associated with this option; however, the annual operating costs would be the highest of the options presented in this paper.

Option 2: Decommission the CE and B&W simulators in FY 2000 but maintain the TTC and the whole TTC staff in Chattanooga, TN.

This option would decommission the CE and B&W simulators but would maintain the GE and Westinghouse simulators and the whole TTC staff in Chattanooga, TN. Decommissioning the CE and B&W simulators would be based on programmatic considerations and overall cost-benefit. The staff believes that an adequate level of vendor-specific knowledge and skills necessary for successful job performance can be obtained through enhanced classroom training and on-the-job training. Additionally, the added value of CE and B&W simulator training is not considered high enough in comparison with the relatively high cost per student to justify continued operation of the CE and B&W simulators. This option would maintain the existing experienced and qualified TTC staff. Maintaining a geographically separated TTC facility and staff, however, does not achieve the effectiveness and efficiency gains desired by management.

The one-time costs which would be incurred if this option were adopted are $0.2M. These would be the costs to dispose of the CE and B&W simulators and reconfigure TTC space. Of all the options involving two simulators (i.e., Options 2, 3, and 4), the one-time costs for this option would be the lowest while the annual operating costs would be the highest.

Option 3: Decommission the CE and B&W simulators in FY 2000; maintain a small staff in Chattanooga, TN, for implementation of simulator training (approximately 8 FTE); and move the other TTC staff members (approximately 18 FTE) to headquarters by mid-FY 2001.

This option would decommission the CE and B&W simulators for the reasons discussed in Option 2 and maintain the GE and Westinghouse simulators and a small staff to conduct simulator training in Chattanooga, TN. This option would move the TTC staff not directly tied to simulator training and maintenance to headquarters by mid-FY 2001 and would require reconfiguring the White Flint complex to accommodate TTC staff offices, classrooms, and other space. This option would achieve most of the effectiveness and efficiency gains desired by management resulting from a geographically consolidated training organization. It would not, however, achieve any of the benefits identified by senior management stakeholders that require the simulators to be in close proximity to the headquarters staff or the headquarters classrooms. This option would necessitate overhire and qualification of personnel to replace TTC staff who would retire or choose not to move. This would result in paying salaries and benefits for both overhires and incumbents for approximately 5 positions for a period of approximately 12 months. It was further assumed that 13 staff members would relocate to headquarters.

The one-time costs which would be incurred if this option were adopted are $2.6M. These would be the costs to dispose of the CE and B&W simulators, reconfigure TTC space, reconfigure TWFN space, relocate TTC personnel, and relocate and train replacement personnel. The annual operating costs for this option would be slightly less than those for Option 2 and about the same as those for Option 4.

Option 4: Decommission the CE and B&W simulators in FY 2000; maintain a small staff in Chattanooga, TN, during FY 2001 - FY 2002 for implementation of simulator training (approximately 8 FTE); move the other TTC staff members (approximately 18 FTE) to headquarters by mid-FY 2001; and move the GE and Westinghouse simulators and remaining TTC staff members to headquarters by the end of FY 2002.

This option would decommission the CE and B&W simulators for the reasons discussed in Option 2, move the TTC staff not directly tied to simulator training and maintenance to headquarters by mid-FY 2001 as discussed in Option 3, and move the GE and Westinghouse simulators and remaining TTC staff to Rockville, MD, in FY 2002. This option would require establishing a simulator training facility in the Rockville, MD, area and reconfiguring the White Flint complex to accommodate TTC staff offices, classrooms, and other space. This option would achieve all of the effectiveness and efficiency gains desired by management resulting from a geographically consolidated training organization. This option would necessitate overhire and qualification of personnel to replace TTC staff who would retire or choose not to move. This would result in paying salaries and benefits for both overhires and incumbents for approximately 8 positions for a period of approximately 12 months. It was assumed that 18 staff members would relocate to headquarters.

The one-time costs which would be incurred if this option were adopted would be $4.3M. These would be the costs to dispose of the CE and B&W simulators, reconfigure TTC space, reconfigure TWFN space, relocate TTC personnel, relocate and train replacement personnel, move the GE and Westinghouse simulators and other equipment, and establish a simulator building lease. As indicated above, the annual operating costs for this option would be about the same as those for Option 3.

RESOURCES:

The FY 2000 appropriation and the FY 2001 budget request to OMB is based on Option 1. Therefore, funds are not included in FY 2000 or FY 2001 to cover the one-time costs associated with Options 2, 3, or 4. The incremental funds needed (i.e., total funds needed less total funds already budgeted for the technical training function) for FY 2000 and FY 2001 for each option are shown below.

	FY 2000	**FY 2001**
Option 1	N/A	N/A
Option 2	$0.1M	N/A (Net savings)
Option 3	$0.8M	$1.1M
Option 4	$0.8M	$1.1M

The staff could accommodate the funds needed under Option 2 by reallocation of funds budgeted for the technical training program.

If the Commission adopts Option 2, the staff would fund the approximately $0.1 million in incremental cost from available FY 2000 funds for the technical training program. Funds to meet the additional needs under Options 3 or 4 for FY 2000 could potentially come from reallocating the FY 2000 appropriation and using prior year carryover. The staff would use carryover to fund the incremental costs if sufficient carryover were known to be available. However, the amount of carryover that could be used for this purpose is uncertain at this time given other high priority agency demands (e.g., pay raise) for these funds. Because of these uncertainties, a decision to use carryover funds should not be made until mid-year FY 2000. Reallocation of the budget request for FY 2001 is the only option given that the carryover for FY 2001 is unknown.

Staff actions necessary to implement Options 2, 3, or 4 would be done within existing FTE resources by delaying or eliminating other currently planned work. For Option 2, these actions would include establishing and managing a contract for elimination of the CE and B&W simulators and subsequent TTC space restoration, and resources to enhance the CE and B&W classroom and on-the-job training to replace the simulator training. For Option 3, actions include those listed for Option 2 plus actions necessary to effect a move of the TTC staff, overhire replacement staff, and reconfigure the White Flint complex to establish TTC staff offices, classrooms, and other training space. For Option 4, actions include those listed for Options 2 and 3, plus actions to establish and manage a contract for a headquarters simulator training facility and to establish and manage a contract for moving the remaining 2 simulators and TTC equipment to headquarters.

RECOMMENDATION:

The staff recommends that the Commission approve implementation of Option 4. With respect to the number of simulators, the added value of CE and B&W simulator training does not justify the relatively high costs to maintain these simulators. An adequate level of knowledge and skills for the CE and B&W reactor technology areas can be obtained through enhanced classroom training and on-the-job training. Adoption of this option would achieve the programmatic efficiencies identified by agency senior managers, and allow better overall utilization of training staff resources to address agency needs while costing about the same as Options 2 and 3. Having the TTC function in headquarters would improve program effectiveness by making the simulators and instructors more available to the program offices and providing better access by the training organization to managers and subject matter experts in the program offices. A higher overall utilization of simulators and technical training courses would likely result since headquarters personnel would not have to travel to attend training currently conducted at the TTC.

As with Options 2 and 3, Option 4 would result in long-term savings compared to the status quo (Option 1), primarily as a result of eliminating simulators and reduced space occupancy costs. While additional near-term costs must be incurred, the total 11-year costs of Option 4 would not be significantly different from those in Options 2 and 3 which also would involve operating two simulators. In order to complete Option 4 within the time frames discussed, the staff would need to begin in early FY 2000.

The staff recommends funding the incremental costs of $0.8 million for FY 2000 by using available carryover and, if necessary, reallocating FY 2000 appropriated funds. Specifics would be determined during the FY 2000 mid-year resource review and the Commission will be informed. To provide the additional $1.1 million in FY 2001, the staff would reallocate the FY 2001 budget during the development of the FY 2002 budget for Commission review.

COORDINATION:

The Office of the General Counsel has reviewed this Commission paper for legal implications and has no legal objection.

The Office of the Chief Financial Officer has reviewed this Commission paper and concurs with the resource discussions.

original /s/ by
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Attachments: As stated