U.S. Nuclear Regulatory Commission Implementation Plan for the Radiation Source Protection and Security Task Force Report

Enclosure

Introduction

The Energy Policy Act of 2005 (EPAct) requires establishment of an interagency task force on radiation source protection and security under the lead of the U.S. Nuclear Regulatory Commission (NRC). The Interagency Radiation Source Protection and Security Task Force is to evaluate and provide recommendations to the President and Congress relating to the security of radiation sources in the United States from potential terrorist threats, including acts of sabotage, theft, or use of a radiation source in a radiological dispersal device (RDD).

In particular, the Task Force is to evaluate and make recommendations for possible regulatory and legislative changes on several specific topics related to the protection and security of radiation sources. For the purposes of the Task Force, the EPAct defines a radiation source as a "Category 1 Source or a Category 2 Source as defined in the Code of Conduct[1] and any other material that poses a threat such that the material is subject to this section, as determined by the Commission, by regulation, other than spent nuclear fuel and special nuclear material." Although the EPAct refers to "radiation sources," this implementation plan uses the more common term, "radioactive sources."

The Task Force is required to submit its reports to Congress and the President; it submitted its first report on August 15, 2006. The Task Force will submit subsequent reports not less than once every 4 years. The first report contained 10 recommendations and 18 actions that address the security and control of radioactive sources.

The EPAct further requires that the Commission "...in accordance with the recommendations of the task force...take any action the Commission determines to be appropriate, including revising the system of the Commission for licensing radiation sources." The staff has developed this implementation plan to outline and track the actions that the NRC plans to take to address the recommendations and actions contained in the Task Force report.

Development of the Implementation Plan

The NRC's plan for implementing the Task Force recommendations and actions includes a specific implementation plan for each of the Task Force recommendations and actions. These targeted plans constitute the body of this report. The NRC Office of Federal and State Materials and Environmental Management Programs (FSME), Office of Nuclear Material Safety and Safeguards (NMSS), Office of Nuclear Security and Incident Response (NSIR), Office of International Programs (IP), Office of the General Counsel (OGC), and Office of Public Affairs (OPA) are involved in the implementation of the recommendations and actions. Other agencies involved in implementation are the Department of Homeland Security (DHS), Federal Emergency Management Agency, Transportation Security Administration (TSA), Department of State (DOS), Department of Transportation (DOT), Department of Defense (DOD), Federal Bureau of Investigations (FBI), Central Intelligence Agency (CIA), Environmental Protection Agency (EPA), Department of Commerce (DOC), Department of Energy (DOE), Department of Justice, Food and Drug Administration, Department of Health and Human Services (HHS), and Office of the Director of National Intelligence (ODNI).

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1 "Code of Conduct" refers to the "Code of Conduct on the Safety and Security of Radioactive Sources," approved by the Board of Governors of the International Atomic Energy Agency (IAEA) and published January 2004.

Organization of the Implementation Plan

Each entry in the main body of the plan presents a strategy for implementing an individual Task Force recommendation or action. Where appropriate, the individual plans include task breakdowns and a discussion of any known issues that could challenge implementation.

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The implementation plan is a living document. FSME updates the plan as implementation of the recommendations and actions progress.

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Implementation Plans for Individual Recommendations and Actions

Recommendation 3-1	Reevaluation of Sources that Warrant Enhanced Security and Protection	NRC lead
		8/8/10

Task: The Task Force recommends that the U.S. Government periodically reevaluate the list of radioactive sources that warrant enhanced security and protection to assess its adequacy in light of the evolving threat environment.

Cite: Chapter 3—Radioactive Source Lists

Report Context: The Code of Conduct serves as an appropriate framework for considering which sources warrant additional protection. The Code of Conduct considers that a country should "define its domestic threat, and assess its vulnerability with respect to this threat for the variety of sources used within its territory, based on the potential for loss of control and malicious acts involving one or more radioactive source." In general, U.S. programs adhere to this philosophy. However, the threat environment is not static but changes continually. Therefore, it is good practice to occasionally reevaluate the potential attractiveness of the radioactive sources for malevolent use. The Task Force recommends that the U.S. Government periodically reevaluate the list of radioactive sources that warrant additional security and protection. This reevaluation should be coordinated within the Federal family and can be performed as part of the Task Force activities every 4 years. If the reevaluation determines that the list of sources should be expanded, the U.S. Government should consider appropriate revisions to its national requirements and work with the international community to revise the Code of Conduct, as appropriate.

Potential Issues: On October 2, 2007, Secretary of Homeland Security Chertoff sent a letter to NRC Chairman Klein that provides the results of a review recently conducted by the Nuclear Government Coordinating Council (NGCC) and the Nuclear Sector Coordinating Council (NSCC) in connection with Government Accountability Office (GAO) report entitled, "Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources Are Not Effective." At this time, the Task Force is attempting to avoid any duplication of effort with the recommendations of the NGCC and NSCC.

Agencies Involved: All Task Force agencies. The current subgroup comprises representatives from NRC, DOE, DOS, DOD, DHS, and ODNI.

Program Office Action: The Task Force, specifically the Subgroup on Source Lists, will reevaluate the source list as part of its activities every 4 years. This subgroup had been sunset until the next cycle; if information became available that warranted an early evaluation of this topic, the Task Force could reactivate the subgroup earlier. At the April 25, 2007, Task Force meeting, the Task Force agreed to reactivate the subgroup at the request of DHS. NSIR is leading the reactivated subgroup.

Resources: The budget does not specifically include resources for this project, which would be considered part of routine activities.

Recommendation 3-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
Task Force	Reactivate Sources Subgroup at 4/25/07 meeting	Complete
Sources Subgroup	Provide terms of reference for Task Force approval	Complete
Sources Subgroup	Provide proposed path forward to Task Force	5/08
Sources Subgroup	Provide report to Task Force	10/08
Task Force	Reactivate the Sources Subgroup for next report cycle	4/30/09
Sources Subgroup	Reevaluate as part of next Task Force report—initial evaluation	12/31/09
Sources Subgroup	Provide recommendation/conclusion to Task Force	1/31/10

Recommendation 4-1	Public Education Campaign	DHS lead
		Ongoing

Task: The Task Force recommends establishing a coordinated public education campaign (Federal, State, and industry) to reduce fears of radioactivity, diminish the impact of a radiological attack if one were to occur, and provide a deterrent to attackers considering the use of radiological materials.

Cite: Chapter 4—Security and Control of Radioactive Sources

Report Context: Another important aspect of response training is public education. Proactively educating the public about the radiation risks of an RDD may reduce the public's anxiety and ameliorate the psychological impacts in the event of an RDD attack, thereby mitigating some of the consequences of physical and social disruption caused by fear and panic. Agencies should coordinate to avoid duplication of effort and ensure the consistency of the intended message. Therefore, the Task Force recommends establishing a coordinated interagency (Federal and State) campaign, which would work with industry groups to educate the public on the effects of and response to an RDD event.

Potential Issues: No known issues.

Agencies Involved: All Task Force agencies.

Program Office Action: DHS has the lead for this effort. Within the NRC, FSME, NMSS, IP, NSIR, and OPA will participate as appropriate. No specific actions have been identified for the NRC. FSME participates as a member of the subgroup.

Resources: The NRC does not have any resources specifically budgeted for this effort. The NRC will participate as appropriate.

Recommendation 4-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
Subgroup Public Education	Present concept paper to Task Force	Complete

Recommendation 4-2	Coordination and Communication for Radiation Protection and Security Programs	Task Force/NRC lead
		Ongoing

Task: The Task Force recommends that the Federal agencies and States continue efforts to improve coordination and communication of their ongoing activities in the area of radiation protection and security for Category 1 and 2 sources.

Cite: Chapter 4—Security and Control of Radioactive Sources

Report Context: Federal and State agencies are implementing many activities and programs related to radioactive source protection and security. These activities and programs require coordination and cooperation between the interested stakeholders to ensure that their approaches do not conflict and to avoid duplication of effort. While such coordination and communication do occur, improvement is always possible and helps to enhance the programs. Therefore, the Task Force recommends that the Federal agencies and States continue efforts to improve coordination and communication of their ongoing activities in the area of radiation protection and security for Category 1 and 2 radioactive sources. This Task Force is one mechanism for improving coordination.

Potential Issues: No known issues.

Agencies Involved: All Task Force agencies.

Program Office Action: The Task Force, led by the NRC, will facilitate the coordination and communication of activities. The Director of FSME serves as the point of contact for Task Force activities, and the FSME staff coordinates the Task Force activities. The Task Force will continue to meet twice each a year, at a minimum, to discuss topics of interest and to receive status reports on the implementation of the recommendations and actions. The Task Force will meet with other committees, task forces, working groups, and organizations to exchange information on activities. The Task Force will also consider hosting a public meeting on a periodic basis. Task Force members will strive to keep other members informed of various presentations and activities by informing the Task Force of meetings and providing presentation material to other members for information purposes only. The Task Force has developed this integrated implementation plan and will update the plan to indicate progress before each meeting. FSME will facilitate the exchange of information.

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NRC staff participation on other committees and working groups, which involve outside stakeholders, also serves to promote coordination and communication.

Resources: The FSME budget contains one full-time equivalent (FTE) for Task Force-related activities in Fiscal Year (FY) 2008. This one FTE covers the resources necessary to run the Task Force. Participation in other committees and working groups would be covered as part of routine activities.

Recommendation 4-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NMSS, FSME	Hold Task Force meeting—9/06	Complete
FSME, Task Force	Hold Task Force meeting—12/6/06	Complete
FSME, Task Force	Issue integrated implementation plan—3/7/07 (SECY-07-0046, "Integrated Implementation Plan for the Radiation Source Protection and Security Task Force")	Complete
FSME, Task Force	Hold Task Force meeting—4/25/07	Complete
FSME, Task Force	Hold Task Force meeting—11/29/07	Complete
FSME, Task Force	Hold Task Force meetings	Spring and fall of each year

Recommendation 5-1	Transportation Security Memorandum of Understanding	NRC lead
		1/31/08

Task: The Task Force recommends development of a transport security memorandum of understanding (MOU) to serve as the foundation for cooperation in the establishment of a comprehensive and consistent transport security program for risk-significant sources.

Cite: Chapter 5—Transportation Security of Radioactive Sources

Report Context: The current MOU between DOT and the NRC has served as the foundation for cooperation and consultation regarding the transportation safety program. However, it does not cover transportation security. Although TSA is primarily involved in transportation security, it was not a signatory to the existing MOU. Because of the importance of transportation security, a similar MOU should address this issue. Therefore, the Task Force recommends developing an MOU for transportation security of risk-significant sources. This agreement, similar to the one for transport safety, would clarify the roles and responsibilities of each agency, forge a spirit of cooperation and awareness among the participants, reduce duplication of efforts, and most importantly ensure development of a comprehensive and consistent transport security program.

Potential Issues: No known issues.

Agencies Involved: NRC, DOT, DHS, and DOE (information only).

Program Office Action: NSIR will initiate discussions with DOT and DHS to develop an MOU on transportation security. NSIR will keep DOE informed of activities; however, DOE will not participate directly in the discussions and will not be a signatory to the MOU. NMSS, FSME, and OGC will participate as appropriate.

Resources: The staff estimates that 0.5 FTE is required to develop and approve an MOU. This effort will be split over FY 2007 and FY 2008.

Recommendation 5-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR	Develop strawman MOU to facilitate discussion	Complete
NSIR	Hold meetings to discuss draft MOU	Ongoing
NSIR	Approve and sign MOU	1/31/08

Recommendation 5-2	Evaluate Technologies To Detect and Discourage Theft during Transport	DOT/DHS lead
		8/8/10

Task: The Task Force recommends that the U.S. Government evaluate the feasibility of using new and existing technologies to detect and discourage the theft of risk-significant radioactive material during transport. The evaluation should include the findings from operational testing of existing technologies offering enhanced security of motor carrier shipments of hazardous material; shipment tracking, including communication systems; radiofrequency identification; vehicle disabling technologies; and mobile and stationary radiation detection systems.

Cite: Chapter 5—Transportation Security of Radioactive Sources

Report Context: Given the current level of technology, the tracking of packages, shipments, and conveyances is possible and would improve security. Although not a fatal flaw in the tracking of hazardous materials, the rapid growth of technology available to track packages, shipments, and conveyances may offer the transport community good benefit at marginal costs. To take full advantage of this technology, transport security officials need to research the technology, including costs and benefits, to determine where it should be applied.

EPA and DOE (Oak Ridge National Laboratory) are testing the use of radiofrequency identification to track and monitor the shipment of radioactive materials in commerce. Various radioisotopes, including strontium-90, cesium-137, cobalt-60, and californium-252, have been shipped in Type A packaging embedded with these tags. Initial results are very encouraging and indicate that this technology is a viable way to physically track shipments of less than a truckload of material.

The Federal Motor Carrier Safety Administration has conducted operational tests of existing technologies offering enhanced security for motor carrier shipments of hazardous materials. This 2-year test program evaluated the costs, benefits, and operational processes required for wireless communications systems, including global positioning system tracking and digital telephones; in-vehicle technologies, such as onboard computers, panic buttons, and electronic cargo seals; personal identification systems, including biometrics and a user name/password system; and vehicle tracking, including geofencing and trailer tracking systems. These tests may form the basis of regulation to require vehicle tracking and communications systems and antitheft technologies for motor carriers transporting certain classes and quantities of hazardous materials. The results of this study should be evaluated to see which if any of these technologies should be required for transporting risk-significant radioactive material.

One method to thwart hijackers is to disable the truck carrying the material they wish to obtain. DOT has been evaluating vehicle-disabling technologies, and this effort should continue. Specific aspects to be studied include safety and security testing of these systems, evaluating costs and benefits of using industry-standard truck disabling technologies, identifying best practices for safety and security applications of remote vehicle-disabling technologies in trucking operations, and conducting field operational testing of this technology.

One way to uncover illicit trafficking is the use of detection devices. The U.S. Government should continue testing and evaluating mobile and stationary radiation detection devices for used on truck traffic. The testing should evaluate a system's capability to detect loads of radioactive materials and to identify specific isotopes and quantities present in shipments.

The U.S. Government needs to research these technologies, along with their implementation and maintenance costs, to determine the feasibility of applying them to shipments of risk-significant radioactive materials. Fact finding should include interactions with interested stakeholders, such as industry representatives. The Task Force should establish a forum to promote the exchange of information and provide a common-interest setting that may result in collaboration. To accomplish these objectives, the Task Force recommends that DHS and DOT work with the Transportation Security Subgroup to study shipment tracking options. The group should report back to the Task Force within 2 years with recommendations on shipment tracking.

Potential Issues: No known issues.

Agencies Involved: DOT, DHS, DOE, NRC, EPA, and DOS.

Program Office Action: DOT and DHS have the lead for implementing this recommendation. The Transportation Security Subgroup will be involved in the evaluation, with participation from NSIR and NMSS. The subgroup should coordinate with the Interagency Coordinating Committee (ICC) on National Source Tracking. For those security technologies not related to source tracking, the subgroup should coordinate with the DHS Government Coordinating Council—Radioisotope Subcommittee. Within the NRC, NSIR has the lead.

Resources: Neither DHS nor DOT have taken any action that involves NRC staff to implement this recommendation.

Recommendation 5-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR, NMSS	Participate in subgroup activities	TBD by DOT/DHS
Transportation Security Subgroup	Prepare report to the Task Force on recommendations and conclusions	TBD by DOT

Recommendation 5-3	Development of International Transport Security Guidance	DOT/NRC
		Ongoing

Task: The Task Force recommends that the U.S. Government immediately develop a strategy and take actions to address the security of international shipments of Category 1 and 2 radioactive sources that transit or are transshipped through the land territory of the United States.

Cite: Chapter 5—Transportation Security of Radioactive Sources

Report Context: In response to the potential for the malevolent use of Category 1 and 2 sources, the United States has implemented prescriptive security measures designed to control the domestic transport, import, and export of these sources as defined in the Code of Conduct. The U.S. Government is also participating in international efforts to develop similar security standards for the international transport of such sources.

Internationally, IAEA has developed the Code of Conduct and the supplementary Guidance on Import and Export of Radioactive Sources. These documents address notification and consent provisions in connection with the import or export of Category 1 and 2 sources, but they do not include these provisions for transit (no conveyance change) or transshipment (involving conveyance change) of radioactive sources that do not have an origination or final destination point within a given country but are transported through the land territory of the country. Developers of the Code of Conduct and the guidance acknowledged the need for additional work to define the transit and transshipment portions of transportation, consistent with international law. The Task Force believes that completion of this effort is vital. The lack of knowledge about these shipments is one of the most significant gaps in transportation security. The Task Force recognizes that it cannot resolve this issue on its own, as resolution will require international cooperation to revise international transportation standards to include enhanced security measures. The mission of the Transit and Transshipment Interagency Working Group is to evaluate this specific area and to develop a U.S. position that can be used in international negotiations. This position should be consistent with existing U.S. positions on international transportation of radioactive material as well as existing international law. These efforts should not only continue, they should be accelerated.

As a practical matter, transshipment requirements can only be imposed and enforced through international cooperation. However, the NRC has worked with several foreign companies for the voluntary submission of information related to transits and transshipments. The NRC shares the information with other regulatory bodies such as U.S. Customs and Border Protection (Customs) and the States through which the material is transiting. In the interim, until international transportation security guidance is developed and implemented on a broad basis, the NRC should continue its efforts to obtain this information from shippers making transit or transshipments of radioactive sources through the United States.

To close the international transport security gap, the Task Force recommends that the NRC, DOT, DOS, and other interested Federal agencies continue to work with IAEA to develop international transport security guidance material for risk-significant sources. The participating agencies should work to coordinate the IAEA program with the existing U.S. requirements and

ensure that U.S. law and regulations reflect the IAEA standards as soon as possible. The domestic strategy for controlling Category 1 and 2 source transport consists of increased security transport measures, promulgated by the NRC, which licensees that ship or receive sources will impose on the carriers. Upon issuance of international transport security guidance, the NRC, DHS, DOT, and interested Federal agencies should develop an implementation strategy and schedule to define the transport security requirements for import, export, transit, and transshipments of Category 1 and 2 radioactive sources in the United States.

Potential Issues: The issue of transit/transshipment notifications is controversial because of the impact of notification requirements on domestic and international agencies.

Agencies Involved: NRC, DOT, DHS, DOS, DOE, and EPA.

Program Office Action: NMSS and NSIR will participate in the Transit and Transshipment Interagency Working Group. NMSS and NSIR staff participate in the IAEA working groups on the transportation security guidance document. If IAEA revises the transportation security guidance document, the NRC will work with DOT to revise the transportation regulations.

Resources: Resources for participation on the Transit and Transshipment Interagency Working Group and IAEA standards committee are already addressed in the budget and are part of routine activities. However, the budget does not currently include resources for a rulemaking, if necessary. The NRC would budget and prioritize the rulemaking should IAEA revise its guidance document.

Recommendation 5-3		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NMSS, NSIR	Participate in IAEA transportation guidance working group	Ongoing
NRC, DOT, DHS, DOS	Participate in closed Commission meeting on transshipments and domestic shipments—10/24/06	Complete
NSIR	Participate in Radioisotope Subcouncil for the Government Coordinating Council	Ongoing
NSIR	Participate in NSCC	Ongoing
NSIR, NMSS	Participate in Transit and Transshipment Interagency Working Group	Ongoing

Recommendation 9-1	Waste Solutions	DOE lead
		Ongoing

Task: The Task Force recommends that the U.S. Government further evaluate the waste disposal options as outlined in the GAO reports on low-level radioactive waste (LLRW).

Cite: Chapter 9—National System to Provide for the Proper Disposal of Radioactive Sources

Report Context: Only two commercial disposal facilities (Barnwell and Richland) can accept Class A, B, and C sealed sources. The third existing LLRW facility (Clive) does not accept any sealed sources.

Although both the Barnwell and Richland disposal facilities accept most Class B/C sealed sources, much of the country's disused Class A, B, and C sealed sources that cannot be reused or recycled go to the Barnwell facility for disposal. However, license conditions prevent the disposal of some Class B/C sources at either facility. In addition, the Barnwell facility is scheduled to close to the 36 non-Atlantic Compact States in June 2008, leaving sealed source generators in those non-Compact States without a disposal option. Consequently, those generators will have to store their disused sources unless other disposition options are identified.

GAO reported to the Senate in June 2004 (GAO-04-604) on LLRW disposal availability. GAO identified three legislative options for addressing a potential shortfall in LLRW disposal availability that still apply to the current situation:

(1) Allow the current compact system under existing Federal legislation to adapt to the changing LLRW situation (i.e., maintain the status quo). GAO concluded that this option "may no longer be tenable if there are no assured safe, reliable, and cost-effective disposal options put forward to address a potential shortfall in disposal availability for class B and C wastes after mid-2008."

(2) Repeal the existing Federal legislation to allow market forces to respond to the changing LLRW situation. GAO stated that this option could "create a national LLRW disposal market that might lead to more competition and lower disposal rates." However, GAO noted that States that host LLRW disposal facilities would likely resist opening their disposal facilities nationally and could take several actions to restrict access (e.g., decide not to renew leases for State-owned land).

(3) Use DOE disposal facilities for commercial waste. GAO identified a number of issues that require resolution and possible legislation concerning the use of DOE facilities for commercial waste. First, it is not clear whether DOE currently has the authority to accept commercially generated LLRW at its disposal sites. Second, a determination would be needed regarding who (e.g., generators, States, or DOE) pays the additional cost for disposing commercial waste at DOE facilities. Third, licensing and regulatory oversight issues would need to be clarified since the NRC and Agreement State regulations that govern commercial facilities do not apply to DOE disposal facilities. GAO further noted that the use of DOE facilities might have the adverse effect of

eliminating the financial viability of commercial disposal facilities and possibly putting DOE disposal facilities in competition with private facilities. It also observed that Nevada and Washington, the host States for the DOE regional disposal facilities, have objected in the past to having to accept a disproportionate burden of LLRW disposal.

The Task Force did not identify any immediate security concerns related to disposal of Category 1 and 2 sources that warrant revisiting the Low-Level Radioactive Waste Policy Amendments Act (LLRWPAA).

The Task Force identified two other areas that could be explored:

(1) The NRC has the statutory authority to override any compact restrictions and allow the shipment of waste to a regional or other non-Federal disposal facility under narrowly defined conditions (e.g., common defense and security) identified in Title 10, Part 62, "Criteria and Procedures for Emergency Access to Non-Federal and Regional Low-Level Radioactive Waste Disposal Facilities," of the *Code of Federal Regulations* (10 CFR Part 62).

(2) The NRC could facilitate discussions with host States/compacts of operating commercial LLRW disposal facilities to promote access, on an exigency basis, for the disposal of selected sealed sources that, if not disposed, present potential national security concerns. Any such negotiated disposal would be subject to disposal facility site-specific technical considerations.

Potential Issues: This action could require revision of the LLRWPAA.

Agencies Involved: DOE, NRC, and EPA.

Program Office Action: DOE has the lead for this recommendation. FSME will participate as appropriate and monitor DOE progress. No other specific activities have been identified for the NRC.

Resources: Monitoring DOE activities in this area would be considered part of routine activities. The NRC will participate as appropriate.

Recommendation 9-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Monitor DOE activities	Ongoing
DOE, NRC, EPA	Continue to participate in national dialogue with private sector, State agencies, compacts, and professional organizations on possible solutions, including GAO legislative options, to address a potential shortfall in LLRW disposal availability	Ongoing—progress will be reported in the next Task Force report (2010)
DOE, NRC (FSME)	Continue national program for the recovery of unwanted and excess sealed sources that pose a threat to public health, safety, or security	Ongoing
FSME	Revisit guidance on extended LLRW storage	Complete

Recommendation 9-1		
FSME	Update LLRW guidance	6/08

Recommendation 9-2	Evaluation of Financial Assurance	NRC lead
		10/1/09

Task: The Task Force recommends that the NRC evaluate the financial assurance required for Category 1 and 2 radioactive sources to ensure that funding is available for the final disposition of the sources.

Cite: Chapter 9—National System to Provide for the Proper Disposal of Radioactive Sources

Report Context: Not all possessors of sealed sources need to have financial assurance to cover the costs of disposal or other appropriate disposition of the sources, potentially resulting in prolonged storage and possible misuse, abandonment, loss, or theft. The costs of disposal can often be high, prompting a licensee to delay disposal either by choice or economic necessity. Three options—broadening the NRC financial assurance thresholds, assessing a source-specific surcharge for disposal, or assessing a universal disposal surcharge on all licensees—could help alleviate these concerns. Implementation of any of these options would require consideration of the economic impacts to the licensee. As an unintended consequence, the options could also discourage the beneficial use of the radioactive materials because of the increased financial burden.

(1) Option 1—Broadening the NRC Financial Assurance Thresholds

This option would broaden the requirements of 10 CFR 30.35, "Financial Assurance and Recordkeeping for Decommissioning," by applying a lower threshold of radioactivity for determining financial assurance requirements. It would impose a decommissioning surety requirement on the licensee as a function of the cost of disposition of all radioactive material in its possession. Funds would remain secure and inviolate for the exclusive purpose of decommissioning activities associated with the possession of sealed sources and other radioactive material. The disposal cost of sealed sources and other radioactive material would be a subset of these decommissioning activities. This option would ensure that affected licensees set aside adequate funds to properly dispose of sealed sources. However, it would not provide funds to dispose of orphan sources or other sources for which no responsible or financially capable party exists.

(2) Option 2—Assessing a Source-Specific Surcharge for Disposal

This option would develop a financial assurance system by assessing a source-specific surcharge at the time of acquisition or throughout a source's service life to cover the costs of disposal. The option would provide flexibility to spread the surcharge over the life of the source to minimize financial burden and to not discourage the licensee/service provider from offering a service (e.g., use of sealed sources for medical procedures).

The concept would be to create a sinking fund earmarked for source disposal based on its projected disposal cost at the time of acquisition, its service life, and its salvage value, if any. The fund would include an appropriate surcharge at the time of purchase that would be supplemented periodically with a surcharge on the license fee. A third-party financial institution would hold the fund in an interest-bearing escrow account. The

fund would follow the source from licensee to licensee throughout its service life. If the fund exceeded the source's disposal costs, it would be returned, on a pro rata basis, to contributors.

The size of the fund and rate of contribution would depend on a variety of factors, including specific isotope and radioactivity, service life of the source, and salvage value. Licensees could seek relief, in whole or in part, by providing demonstration of an enforceable and fungible path forward other than disposal.

The NRC would periodically evaluate (during license renewal) the adequacy of the accumulation of funds in the sinking fund, taking into account increases or decreases in anticipated disposal costs. If, at the time of license termination, the licensee made alternative arrangements for disposition using monies other than those contained in the disposal escrow fund, the NRC would remand the fund to the licensee.

While such a solution would prospectively ensure that individual licensees would be financially responsible for disposal of their sealed sources, it would not address the disposal of orphan sources or other sources for which no responsible or financially capable party exists.

(3) Option 3—Assessing a Universal Disposal Surcharge on All Licensees

This option would involve assessing a small surcharge on all licensees of radioactive material (i.e., not limited to sealed source licensees) to cover the costs of disposal, similar to a program currently implemented by the State of Texas and other States. The Texas Radiation and Perpetual Care Fund is a State account set up to prevent or mitigate the adverse effects of the abandonment of radioactive materials, default on a lawful obligation, insolvency, or other inability by the possessors or users of radioactive material to manage its proper disposition. Monies in the fund may be used for decontamination, closure, decommissioning, reclamation, surveillance, or other care.

Monies for the fund come from an additional fee assessed on the State's radioactive materials licensees and administrative penalties collected by the enforcement program (from radioactive materials licensees as well as from the registrants of machine-produced radiation). There is no cap on the amount of penalties accrued in the fund.

Such a solution would address a broader range of problematic disposition situations (e.g., existing backlog of orphan sources). However, it would have the disadvantage of spreading the cost burden to licensees who would not specifically benefit from the program.

Because not all Category 1 and 2 sealed sources are subject to current NRC financial assurance requirements and to ensure that sufficient funds are set aside to properly disposition these sources at the end of their useful service, the NRC should evaluate alternative financial assurance options, including a broadening of the financial assurance thresholds in 10 CFR 30.35, a source-specific surcharge for disposal, and a universal disposal surcharge on all licensees. The evaluation should consider impacts to the regulated community and implementation approaches (e.g., the need for legislation and regulation development), and it should involve stakeholders.

Potential Issues: No known issues.

Agencies Involved: NRC, Organization of Agreement States (OAS), stakeholders, DOE, and DOS.

Program Office Action: FSME will evaluate the financial assurance necessary for Category 1, 2, and 3 sources and will form a working group to complete the evaluation. Various stakeholders will be engaged in the process. If a decision is made to pursue additional financial assurance, a rulemaking working group will be formed to develop a rulemaking plan and proposed rule.

Resources: The FY 2009 budget includes resources for this activity. However, the budget does not include resources for a rulemaking, if necessary. The NRC would budget and prioritize the rulemaking, if pursued. This is a medium-priority item.

Recommendation 9-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Form a working group to evaluate	10/1/08
Working Group	Develop a plan to conduct the evaluation	11/1/08
FSME	Make decision on whether to pursue	10/1/09

Recommendation 12-1	Alternative Technologies	NRC lead
		8/31/08

Task: The Task Force recommends that the Alternatives Technology Subgroup evaluate financial incentives; research needs for both alternative technologies and alternative designs, including financial support; and the costs and benefits of potential alternatives for Category 1 and 2 radioactive sources.

Cite: Chapter 12—Alternative Technologies

Report Context: As noted above, for a number of applications, alternative technologies exist or are in development that could reduce the risk or impact of an accidental or terrorist use of a risk-significant radioactive source. In addition, future research in this area could yield even more viable alternative technologies. However, the ultimate success of all such efforts is unclear until a number of critical concerns are addressed. These concerns, discussed below, include incentives for adoption, collaboration between Federal agencies, and the disposition of displaced sources:

- Incentives

  Application of alternative technologies may not be effective unless economic incentives are established to encourage the adoption of those alternatives. Competition in the U.S. marketplace typically encourages and evaluates nonradioactive technology and ultimately determines if it will take the place of radioactive sources or devices. A good example of the marketplace effect is the speed with which drug-coated stents replaced the irridium-192 and strontium-89 high-dose-rate remote afterloader devices used to treat coronary artery restenosis. In other examples, electronically produced x-ray sources have replaced iodine-125 and americium-241 sources in small, hand-held fluoroscopy units and larger scanning bone mineral analyzers, respectively. However, some alternative technologies in the marketplace have not been sufficiently attractive to replace radioactive sources and devices at this time. Thus, even if alternatives are viable, adoption of the alternative in the commercial sector will depend on its feasibility as well as its economic attractiveness.

  Incentives that are intended to promote the adoption of alternative technologies through marketplace forces may require several years to take hold. A wide range of incentives may be needed and should be established with stakeholder input. Regulatory mandates or economic incentives such as underwriting the disposal cost or providing tax incentives may be required to encourage use of the alternatives.

  As one approach, Federal and State agencies could adopt a licensing policy that would require applicants for new uses of radioactive sources to examine alternative technologies. However, the Task Force does not recommend this approach at this time because of potential licensing complications and regulatory impacts and because of the lack of sufficient viable alternative technologies for most radioactive source applications. However, this approach may be more appropriate in the future when alternative technologies are further developed and validated for affected industries, and after cost-

benefit and regulatory and statutory analyses have been performed. This approach would also need to be evaluated from a legal and policy standpoint. The marketplace should be allowed to react to the alternatives before proposing additional changes.

- Outreach

  Stakeholder input leading to the acceptance and ultimate implementation of alternative technologies is essential. Manufacturers, researchers, end users, and validating authorities need to participate in addressing the issues forming barriers for acceptance of an alternative for a given application. Those developing and implementing such alternatives need to include technical and economic criteria as top considerations to ensure that the results are practical. Those involved in developing alternatives must partner with end users to develop these criteria. This cooperation should provide research direction, facilitate information sharing, and avoid duplication of effort.

- Collaboration

  As discussed above, various Federal agencies have initiated a number of independent projects on alternative technologies. These initiatives could yield additional viable alternatives to existing sources, pending the availability of resources. However, to reduce duplication of effort and to benefit from the synergy resulting from an open exchange of research results, collaboration among Federal agencies is needed.

  To facilitate collaboration, the Interagency Steering Committee on Radiation Standards (ISCORS) could be requested to form a new subcommittee with representatives from agencies that are conducting activities related to the research and development of alternative technologies. This subcommittee would meet regularly and report to the ISCORS full committee. This approach is consistent with the ISCORS charter for coordination on radiation issues among Federal agencies. In addition, Federal agencies should continue to participate in the EPA Alternative Technology Initiative.

- Cost-Benefit Analysis

  Concurrent with research and development, Federal agencies should conduct a comprehensive cost-benefit analysis to gauge the attractiveness and potential impacts to the marketplace of alternative technologies. Federal agencies could also use this analysis to evaluate other potential benefits and impacts from replacing radioactive sources and devices that use radioactive sources with nonradioactive alternatives or replacing them with lower risk sources (e.g., different chemical/physical form, lower activity). This information would be made available to radioactive source users, suppliers, and manufacturers as a way to foster the infrastructure needed to support the use of alternative technologies. This activity should take into consideration the recommendations of the ongoing National Academy of Sciences (NAS) study, which is expected to consider technical and economic feasibility and risks to workers from such replacements.

- Displaced Sources

  The replacement of existing risk-significant radioactive sources, by either a nonradioactive process or an RDD-resistant radioactive source, will result in an accumulation of unneeded or displaced radioactive sources. Because the objective of developing alternative technologies is to reduce the number of radioactive sources at risk for malevolent use, the accessibility of unneeded sources must be addressed for alternative technologies to be of benefit. In order to reduce the overall security and safety risks associated with radioactive sources, the displaced sources must either be disposed of or stored in locations that are at least as secure as the ones from which they came. Accordingly, in addition to the efforts expended in promoting the development and adoption of alternative technologies, parallel efforts are needed to ensure that storage and disposal options are available for the disposition of risk-significant radioactive sources displaced by the adoption of alternative technologies.

  In those cases in which disposal options are prohibitively expensive or not available, strong incentives may be present to sell or donate these sources to recipients in other countries, especially the developing world. Other countries may have an incentive to purchase the sources because of healthcare needs. Export as an alternative disposal path should be discouraged through adequate oversight, awareness on the part of U.S. licensees, coordination with capable partners such as IAEA and the Pan American Health Organization, and voluntary application of ethics and good business practices. Furthermore, the United States and the international community should coordinate to harmonize the development and use of alternative technologies.

- Passive Features

  Enhanced security features incorporated in new designs could make it harder for a person with malevolent intent to remove a source from a device. In so doing, the added delay would improve the chances of stopping the malevolent act. Enhanced security features incorporated in new designs could provide additional access controls, alarms, and tracking. This would allow only authorized users to remove or operate the device and trigger an alarm upon unauthorized access.

Additional work is necessary before the Task Force can make an informed decision and provide specific recommendations on which alternatives should be pursued, what type of incentives should be made available, and other considerations. Therefore, the Task Force recommends that the Alternative Technologies Subgroup conduct further study to evaluate financial incentives; research needs for both alternative technologies and alternative designs, including financial support; and the costs versus benefits of potential alternatives for Category 1 and 2 radioactive sources. The next Task Force report will address these topics. The subgroup should report back to the Task Force within 2 years with its report, including possible recommendations, on alternative technology research, incentives, and related issues. The 2-year timeframe will allow the subgroup to consider in its deliberations the findings of the NAS study and the response to the DOE report to Congress. This task should address the following activities:

- Provide economic incentives. To complement the creation of research and development programs, consideration could be given to creating financial incentives for

manufacturers, distributors, and users of alternative technologies. Incentives could include the following:

– revision of Federal tax law to provide tax credits or other financial incentives to users that purchase products using approved alternative technologies

– reduction of the cost of alternative technologies by providing fiscal benefits to the manufacturers and distributors of these technologies

– authorization for Federal agencies to underwrite the cost of retrieval, storage, and disposal of those specific sources that become displaced when an alternative technology is adopted

- Conduct outreach to affected stakeholders. Federal agencies should promote the adoption of alternative technologies by manufacturers, distributors, and users by conducting educational outreach to affected stakeholders, including licensees and other users that would benefit from the use of alternative technologies.

- Promote collaboration. Federal agencies should collaborate with each other and the international community on various issues associated with the development and adoption of alternative technologies. Federal and State agencies should coordinate activities in evaluating, developing, or implementing alternative technologies.

- Fund research and development programs. The subgroup should provide suggestions for the level of funding likely to be needed for particular projects related to research and development on alternative technologies for risk-significant radionuclides (IAEA Category 1 and 2 sources), taking into account a realistic envelope for such efforts.

- Conduct cost-benefit analyses. The report should evaluate alternative technologies based on the NAS cost-benefit analysis and should also conduct an independent cost-benefit analysis.

- Evaluate storage and disposal options for sources that are replaced or displaced by alternative technologies. The report should identify safe and secure storage options or permanent disposal of those sources that are displaced because of alternative technologies.

Possible Issues: Potential classification of information.

Agencies Involved: NRC, HHS, DOE, EPA, DOS, DOD, and DHS.

Program Office Action: The Alternatives Technology Subgroup will conduct the evaluation for this recommendation. The subgroup, led by FSME, will need to factor in results from the NAS study on alternatives. The subgroup will develop a plan to fully analyze the issue and will report back to the Task Force in 2 years with any recommendations. The Alternatives Technology Subgroup comprises representatives from NRC, HHS, DOE, EPA, DOS, DOD, and DHS.

Resources: The budget includes resources for these activities.

Recommendation 12-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Lead the Alternative Technologies Subgroup	Ongoing
FSME	Invite NAS to present report findings to Task Force	TBD pending resolution of classification issues and formal submittal of the report
Alternatives Subgroup	Provide update to Task Force	Complete
Alternatives Subgroup	Develop plan	TBD based on formal submittal of NAS report
Alternatives Subgroup	Report results of evaluation to Task Force	8/31/08

Recommendation 12-2	Study on Cesium Chloride Phaseout	NRC/DOS lead
		8/31/08

Task: The Task Force recommends giving high priority to conducting a study within 2 years to assess the feasibility of phasing out the use of cesium chloride (CsCl) in a highly dispersible form. This study should consider the availability of alternative technologies for the scope of current uses, safe and secure disposal of existing material, and international safety and security implications.

Cite: Chapter 12—Alternative Technologies

Report Context: A specific concern is the widespread use of CsCl in a highly dispersible form in certain devices. An accidental release of CsCl in Goiania, Brazil, in 1987 demonstrated that an inadvertent dispersal of one CsCl source can result in significant economic and social impacts. Following the accident, the Goiania region suffered economic and social isolation from the rest of Brazil, 125,000 people were screened for contamination, and more than 120,000 cubic feet of radioactive waste was generated. While alternative technologies exist for certain risk-significant CsCl applications, such as industrial and medical irradiators, not all applications have a readily available alternative at this time.

The Task Force recommends giving high priority to conducting a study within 2 years to assess the feasibility of phasing out the use of CsCl in highly dispersible forms. This study should consider the availability of alternative technologies for the scope of current uses, safe and secure disposal of existing material, and international safety and security implications. The 2-year timeframe would allow the Federal Government to consider the findings of the NAS study in the evaluation. Any phaseout should encourage similar efforts worldwide; coordination and collaboration with international partners will be necessary to most effectively implement a phaseout domestically. A phaseout strategy should take into account the status of disposal options for radioactive sources that may become disused as a result of such a phaseout; the economic feasibility of using alternative radionuclides, physical-chemical forms, or technologies; incentives or other compensation for current users; and measures to ensure that the displaced sources do not find their way into environments with less rigorous controls in place. Entities having major economic interests in the production, processing, and sale of CsCl must participate in discussions on the phaseout of CsCl in highly dispersible forms.

In order to make near-term progress on this issue, the Task Force will form a subgroup with specific interest in this issue immediately to identify near-term actions. This subgroup will determine the attractiveness of these sources for use in an illicit manner. It may be possible to identify readily available technology to replace some applications of these sources. If such an application is identified, additional work will be needed to ensure that disposal capacity for the existing sources exists and to evaluate the impacts on the affected industry, such as the health care and research community. In addition, security issues for sources that may become available on the international market must be addressed. This subgroup will consider information presented in public meetings for the NAS study mentioned in the EPAct.

Potential Issues: Potential classification of some information may complicate interactions with stakeholders.

Agencies Involved: NRC, DOS, HHS, DHS, DOE, EPA, ODNI, and DOD.

Program Office Action: The Task Force has formed a new CsCl Subgroup to study the feasibility of a CsCl phaseout. The NRC, represented by FSME with participation by NSIR, and DOS serve as co-leads for the subgroup. The subgroup will develop a plan of action.

Resources: The budget includes resources for these activities.

Recommendation 12-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
Task Force	Name a subgroup to be headed by the NRC and DOS to conduct study	Complete
CsCl Subgroup	Develop plan of action—11/27/06	Complete
CsCl Subgroup	Present status report to Task Force and Charter for Task Force approval—4/25/07	Complete
CsCl Subgroup	Present status report to Task Force—11/29/07	Complete
CsCl Subgroup	Review NAS report, develop white paper for workshop, circulate *Federal Register* notice for agency concurrence (NRC, DOS)	12/07
CsCl Subgroup	Hold 2-day workshop with stakeholders and Government to discuss potential economic impacts, alternatives, disposal, and security concerns	3/26–27/08
CsCl Subgroup	Report recommendations and conclusions to Task Force	8/31/08

Action 3-1	**Reissuance of Orders to Manufacturer and Distribution Licensees**	NRC lead
		Complete

Task: The NRC should evaluate the need to reissue the orders to manufacturing and distribution (M&D) licensees to ensure that no security issues have been introduced from the use of different units of radioactivity.

Cite: Chapter 3—Radioactive Source Lists

Report Context: In its early orders, the NRC inconsistently used terrabequerel (TBq) and curie units. This inconsistency could cause some confusion for licensees. It could potentially result in the failure to implement enhanced security measures for some Category 2 sources. The NRC should evaluate whether the use of curie values rounded to one significant figure, as in the orders to the M&D licensees, presents any security concerns that need to be addressed. Based on the results of the evaluation, the NRC may want to reissue those orders.

Possible Issues: No known issues.

Agencies Involved: NRC and OAS.

Program Office Action: In October 2006, FSME, with coordination from NSIR, reissued the orders to M&D licensees with the orders on fingerprinting for access to materials. The orders included a new table with TBq units and curie values rounded to two significant figures. No further action is necessary.

Resources: This action is complete. No additional resources are necessary.

Action 3-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME, NSIR	Include new table in fingerprint orders to M&D licensees—10/06	Complete

Action 3-2	**Use of Code of Conduct for Transportation Regulations**	DOT lead
		TBD

Task: DOT should examine the use of the Code of Conduct Category 1 and 2 thresholds in domestic transportation regulations.

Cite: Chapter 3—Radioactive Source Lists

Report Context: The Code of Conduct values are universally understood and implemented. Employing different values for transportation security requirements may cause confusion in the user community. DOT should reconsider the use of highway route controlled quantities (HRCQs) of radioactive material as the baseline for development of a transport security plan or requirement to incorporate additional security measures. Given the international nature of transport and the acceptance by the international community and other U.S. agencies of the Code of Conduct Category 1 and 2 levels, DOT should examine using the Category 1 and 2 thresholds in domestic regulations. In addition, the U.S. Government is working with IAEA to revise the transportation guidance to better align with the Code of Conduct values. This effort should be continued.

Possible Issues: No known issues.

Agencies Involved: DOT, NRC, and DOS.

Program Office Action: DOT has the lead for this item. If DOT decides to change its requirements for consistency with the Code of Conduct, the NRC would revise its regulations at the same time. NMSS and NSIR have routine interactions with DOT. No specific NRC actions have been identified. The NRC did provide comments on three proposed rules (DOT and TSA) that were related to this action.

Resources: Interactions with DOT are part of routine NRC business. Resources to specifically implement this action are not necessary at this time. If DOT decides to conduct a rulemaking, the NRC would budget and prioritize the rulemaking at that time.

Action 3-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
	No specific NRC actions	

Action 4-1	Measures to Verify Validity of Licenses	NRC lead
		6/10

Task: For all licensees authorized to possess Category 1 and 2 quantities of radioactive material, the NRC should consider imposing additional measures to verify the validity of licenses before the transfer of risk-significant radioactive sources.

Cite: Chapter 4—Security and Control of Radioactive Sources

Report Context: With the Internet and photocopy technology, forging a license is relatively easy. Existing regulations require the licensee transferring the material to verify that the intended recipient's license authorizes the receipt of the type, form, and quantity of byproduct material to be transferred. The regulations allow the purchaser to fax a copy of its license to the seller as verification of a valid license to receive the type, form, and quantity of byproduct material. A person with malevolent intent could forge a license to obtain byproduct material. The orders to M&D licensees (the initial suppliers of approved sources and devices) require them to take specific measures to verify the validity of the purchaser's license. However, these sources and devices can be subsequently transferred to other licensees without the additional verification requirement. The specific measure to verify the validity of the purchaser's license (or some other mechanism) must be implemented uniformly to reduce the risk that a forged license will be used to obtain risk-significant quantities of radioactive material. For all licensees authorized to possess Category 1 and 2 quantities of radioactive material, the NRC should consider imposing additional measures to verify the validity of licenses before the transfer of risk-significant radioactive sources.

Possible Issues: No known issues.

Agencies Involved: NRC, OAS, stakeholders, and DHS/Customs.

Program Office Action: FSME will include measures for other licensees when conducting the security-related rulemakings for materials facilities.

Resources: The budgets for the appropriate years will address the security rulemakings.

Action 4-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR	Provide technical basis to FSME for enhanced security for irradiators and M&D licensees and medium-priority licensees	2/08
FSME	Provide proposed rule on enhanced security for irradiators and M&D licensees and medium-priority licensees to Commission	2/11
FSME	Provide final rule on enhanced security for irradiators and M&D licensees and medium-priority licensees to Commission	2/12

Action 5-1	**Application of Lessons Learned on High-Hazard Material to Radioactive Material Transport**	DOT lead
		TBD

Task: The Transportation Security Subgroup should review the findings and conclusions of all research conducted on securing high-hazard hazardous materials transport to determine if any of the measures should be applied to the transport of risk-significant radioactive sources.

Cite: Chapter 5—Transportation Security of Radioactive Sources

Report Context: Since September 11, 2001, the Federal agencies represented on this Task Force have researched transport security programs, implemented security initiatives, and codified transport security plan requirements. Because of the limited number of shipments of risk-significant radioactive sources, these initiatives and programs have focused on shipments of hazardous materials of high consequence. Radioactive material transport experts have not always participated in the development and implementation of these activities. The security programs for risk-significant radioactive sources may be improved by examining the results, implementing the applicable provisions, and determining the lessons learned from hazardous materials security initiatives. Specifically, the Transportation Security Subgroup should review the findings and conclusions of all research conducted on securing high-hazard hazardous materials transport. Although risk-significant radioactive sources pose unique threats, the techniques and technologies used to secure the transport of other hazardous materials of high consequence may also improve the security of radioactive source transportation. Given the greater number of nonradioactive hazardous materials shipments, these practices might also suggest new ideas or methods previously deemed too expensive for the relatively small radioactive material transport industry. This subgroup should pay particular attention to the ongoing DOT studies on securing the transport of material that is toxic by inhalation, explosive material, and flammable liquids and gases.

Potential Issues: No known issues.

Agencies Involved: DOT, NRC, DHS, EPA, CIA, DOD, DOE, DOS, OAS, and Conference of Radiation Control Program Directors (CRCPD).

Program Office Action: As the lead for Transportation Security Subgroup, DOT also has the lead for this item. NMSS and NSIR participate in the subgroup. NSIR has the lead for the NRC. Depending on the outcome of the review, the NRC may need to issue orders or revise its regulations to implement any measures from the lessons learned that are deemed appropriate for the transportation of Category 1 and 2 sources. To date, DOT has not initiated any action.

Resources: DOT has not taken any action that involves NRC staff to implement this item. Depending on the outcome of the review, additional resources may be necessary to implement the lessons learned that are deemed appropriate for Category 1 and 2 sources. Resources for implementation would be addressed at that time.

Action 5-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR, NMSS	Participate in subgroup	TBD by DOT
Transportation Security Subgroup	Evaluate lessons learned	TBD by DOT
NSIR, NMSS	Provide any recommendations to implement any new measures to the Commission	60 days after completion by subgroup

Action 5-2	**Best Practices from High-Threat Urban Area Corridor Assessments**	DOT lead
		TBD

Task: DOT should evaluate the best practices from the high-threat urban area corridor assessments to determine whether it should incorporate any of these practices into the requirements for security plans for high-risk radioactive material. DOT should also evaluate whether the transport of lower risk radioactive material warrants a security plan or whether the transport could be exempted from some of the requirements.

Cite: Chapter 5—Transportation Security of Radioactive Sources

Report Context: In May 2002, the DOT Pipeline and Hazardous Materials Safety Administration (PHMSA) (then known as the Research and Special Programs Administration) proposed regulations to enhance the security of hazardous materials shipments. Although the proposal included provisions on registration certificates, shipping documentation, and training, the major initiative was the establishment of a new requirement that shippers and carriers of HRCQs of radioactive material, explosive material, material that is poisonous by inhalation, and infectious substances have plans to ensure the security of shipments during transportation. Since this rule became final in March 2003, PHMSA and all DOT modal authorities now have some experience with its implementation. The HRCQ requirement addresses other radioactive material and not just those radionuclides in the Code of Conduct. (Chapter 3 of this report addresses thresholds for Code of Conduct radionuclides.) DOT should evaluate whether the transport of some of the lower risk radioactive materials warrants a security plan.

As part of the high-threat urban area corridor assessments conducted in 2005, DHS and DOT identified some best practices for the transport of various hazardous materials. DOT should evaluate the security recommendations that emerged from this program and consider them for inclusion, as appropriate, in the security plans for transporting risk-significant radioactive materials.

Potential Issues: No known issues.

Agencies Involved: DOT, NRC, DHS, EPA, CIA, DOD, DOE, DOS, OAS, and CRCPD.

Program Office Action: As leader of the Transportation Security Subgroup, DOT has the lead for this action. NMSS and NSIR staff participate in the subgroup. NSIR has the lead for the NRC. Depending on the outcome of the review, the NRC may need to issue orders or revise its regulations to implement any measures from the best practices deemed appropriate for the transportation of Category 1 and 2 sources. To date, DOT has not initiated any action.

Resources: DOT has not taken any action that involves NRC staff to implement this item. Depending on the outcome of the review, additional resources may be necessary to implement the lessons learned that are deemed appropriate for Category 1 and 2 sources. Resources for implementation would be addressed at that time.

Action 5-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR, NMSS	Participate in subgroup	TBD by DOT
Transportation Security Subgroup	Evaluate best practices	TBD by DOT
NSIR, NMSS	Provide any recommendations to implement new measures to the Commission	60 days after completion by subgroup

Action 6-1	Fingerprinting Provisions of EPAct	NRC lead
		3/31/09

Task: The NRC should expeditiously complete its implementation of the fingerprinting provisions of the EPAct for those applicants for and licensees with Category 1 and 2 quantities of radioactive material. The NRC should place a high priority on completing the EPAct Section 652 rulemaking. As part of the rulemaking, the NRC should require fingerprinting for any individual who could have access to Category 2 or above quantities of radioactive materials. The NRC should also require periodic reinvestigations of such persons.

Cite: Chapter 6—Background Checks

Report Context: The NRC is in the process of implementing its new fingerprinting authority provided by the EPAct. It has several rulemakings either planned or already underway to implement various fingerprint-related provisions of the EPAct. The NRC must determine what radioactive material or other property warrants fingerprinting for unescorted access. This evaluation is currently ongoing and should be completed this summer. The following rulemakings are either planned or underway:

- The proposed amendment to the rule in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information," for access to Safeguards Information (SGI) by a broad class of individuals as mandated by EPAct Section 652(B)(ii) would require that no person may have access to SGI unless (1) there is need to know, (2) the applicant has undergone an FBI criminal history check, and (3) the licensee has established the person's trustworthiness and reliability based on a background investigation of work history, education history, references, and credit history.

- The proposed amendment to 10 CFR 73.56, "Personnel Access Authorization Requirements for Nuclear Power Plants," would enhance current requirements for granting unescorted access to nuclear power facilities and codify order requirements.

- The proposed amendments to implement EPAct Section 652(B)(i)(II) would establish the requirements for fingerprinting of individuals with unescorted access to radioactive material or other property that the NRC determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks.

- Other proposed amendments implement EPAct Section 656. Section 656(a) states that individuals accompanying or receiving transfer of material in the United States, pursuant to an NRC import or export license, will be subject to a security background check. Section 656(c) states that these requirements will become effective on a date established by the Commission. The NRC believes that the most appropriate and comprehensive approach for establishing requirements for security background checks is as part of the broader considerations of the NRC's planned rulemaking to implement EPAct Section 652. Consistent with Section 656(b), the staff is proposing to amend the NRC's regulations to exempt from the security background check requirements of

Section 170I those licensees that have not received NRC orders restricting unescorted access to radioactive materials, based both on background checks for trustworthiness and reliability and on fingerprinting and criminal history record checks. In the future, more comprehensive Section 652 rulemaking, the staff will consider whether the exceptions for security background checks should be modified.

As part of implementing its new fingerprinting authority, the NRC may issue orders requiring certain licensees to conduct fingerprint checks for employees with access to radioactive materials at Category 1 or 2 levels and with access to SGI. Because orders can be issued more quickly than a regulation that must go through notice and comment, the orders would cover the gap until the new rules are issued. The NRC has also asked some applicants and licensees to submit fingerprints in advance of the orders. The NRC plans to issue orders this summer for any NRC or Agreement State licensee that has access to SGI. The NRC also intends to issue orders to the M&D licensees and large panoramic and underwater irradiator licensees to require fingerprints for any individual who has access to risk-significant quantities of radioactive material. In addition, the NRC plans to order fingerprinting of those licensees who transport Category 1 quantities of radioactive material. The NRC has not decided whether to order fingerprinting for other licensees that may possess risk-significant quantities of radioactive material or to wait until the rulemaking is complete. The Task Force encourages the NRC to require fingerprinting for Federal criminal history checks on any individual with access to Category 1 or 2 quantities of radioactive material.

The NRC should also consider imposing the requirement on license applicants, as well as licensees. The Task Force believes that individuals should be screened before the NRC grants them a license to obtain risk-significant material. A license application screening process that includes fingerprinting for Federal criminal history checks can detect persons with malevolent intent, thereby reducing the risk of radioactive material being diverted or used for malevolent purposes. Until the regulations are in place to require fingerprinting of applicants before they obtain a license, the NRC should explore methods to close this gap. The Task Force encourages the NRC to expeditiously complete its implementation of the fingerprinting provisions of the EPAct for licensees with Category 1 and 2 quantities of radioactive material and those applying for such licenses. The NRC should also consider requiring that individuals with unescorted access to Category 1 and 2 radioactive materials be subject to periodic reinvestigation. One possible method to address this is the expansion of the NRC's Demographic Data Project. This project is a joint collaborative effort by the NRC and the Terrorist Screening Center to identify individuals who pose a threat to national security and who have access to the protected areas and vital areas of nuclear power plants.

Potential Issues: No known issues.

Agencies Involved: NRC, OAS, stakeholders, FBI, and DHS.

Program Office Action: OGC will complete the SGI rule. FSME will complete rules for EPAct Sections 656 and 652. NSIR has completed the Commission paper on fingerprints for access to material for materials facilities other than M&Ds, irradiators, and radioactive material quantities of concern (RAMQC). On December 5, 2007, and FSME issued to nearly 1,000 NRC licensees authorized to possess RAMQC.

Resources: The budget addresses resources to conduct these activities.

Deleted: NMSS

Deleted: will issue orders to

Deleted: licensees.

Action 6-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NMSS	Issue fingerprint orders on SGI to M&D licensees, irradiators, and RAMQC—8/21/06	Complete
FSME, NSIR	Issue fingerprint orders on access to materials to M&D licensees, irradiators, and RAMQC—10/17/06	Complete
NSIR	Develop technical basis to support EPAct Section 652 rule	2/08
NSIR	Provide paper to Commission on fingerprint provisions for rest of materials licensees	Complete
FSME	Issue fingerprint orders on access to materials to all licensees possessing Category 1 and 2 material	12/07
FSME	Publish final rule for EPAct Section 656—1/24/07	Complete
OGC	Provide final rule on SGI to Commission—8/7/07 (SECY-07-0131, "Final Rule–10CFR Part 73–Safeguards Information Protection Requirements")	Complete
OGC	Publish SGI final rule	12/07
FSME	Provide proposed rule on EPAct Section 652 to Commission	12/08
FSME	Provide final rule on EPAct Section 652 to Commission	12/09

Action 6-2	National Database for Materials Licensees	NRC lead
		8/31/08

Task: The NRC should evaluate the feasibility of establishing a national database for materials licensees that would contain information on pending applications and information on individuals cleared for unescorted access.

Cite: Chapter 6—Background Checks

Report Context: There is some concern that an individual could apply for a license application in several different Agreement States and with the NRC. Under the current system, reviewers would not know about multiple applications or if an individual had been refused a license in another jurisdiction. This knowledge can be useful to license reviewers. The Nuclear Energy Institute maintains a database with information on power reactor licensees and individuals with unescorted access to nuclear power plants. This database allows users to track permanent employees and members of the transient workforce who have unescorted access to nuclear power plants and to preclude unauthorized entries. A similar database for materials licensees could be useful to both reviewers and industry. The NRC should evaluate the feasibility of establishing a national database with information on pending applications for a specific license and information about individuals cleared for unescorted access. Reviewers in Agreement States and the NRC regional offices would then be aware of all applicants requesting materials from various regulatory agencies. A national database would effectively and efficiently streamline the information flow regarding current applications for a specific license and information on the current status of employees at particular sites or who may be trying to enter another facility.

Potential Issues: Privacy and security issues related to sharing information on individuals may exist. The NRC would have to obtain commitments from the potential users of the database that they will share the information and use the database for determining the trustworthiness and reliability of (1) those individuals who are being considered for unescorted access to their material or (2) those entities or individuals who have applied for a materials license to possess nuclear materials.

Agencies Involved: NRC, OAS, stakeholders, DHS, and FBI.

Program Office Action: The NRC has the lead for this action. NSIR will establish a working group to evaluate the need for such a database, determine the cost, and make a recommendation for implementation. FSME will participate on the working group. OAS and stakeholders should also be engaged.

Resources: If a decision is made to pursue a database, the resources for the database development would be addressed at that time.

Action 6-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
NSIR	Form working group to evaluate issue	12/07
Working Group	Evaluate issue and make recommendation to NSIR/FSME management	8/31/08

Action 6-3	MOU on Systematic Alien Verification for Entitlements Database	NRC/DHS lead
		12/31/07

Task: The NRC and DHS should enter into an MOU to cover access to the Systematic Alien Verification for Entitlements (SAVE) database for materials licensees.

Cite: Chapter 6—Background Checks

Report Context: DHS requires an MOU to access the verification information system portion of the SAVE program. The NRC was a signatory to a SAVE-related MOU with DHS executed in August 2003. The MOU established the terms and conditions for the participation of the NRC and, at that time, its power reactor licensees in the SAVE program for verifying the immigration status of alien applicants for unescorted access to NRC-licensed reactor facilities. To use the SAVE program under the current umbrella of the NRC/DHS MOU, each licensee must establish its own MOU with DHS. For materials licensees, this would mean 1000 to 2000 individual MOUs. Under a possible revised MOU between the NRC and DHS, an MOU between each licensee and DHS would not be necessary. DHS and the NRC OGC are working on language for the revised MOU. The language changes will address the statutes that govern the SAVE program and also allow NRC licensees to use the SAVE database to check the immigration status of individuals. For the purpose of verifying the true identity of foreign nationals and to aid in trustworthiness and reliability determinations, the Task Force encourages DHS and the NRC (including Agreement States) to complete the MOU. The MOU would authorize use of the SAVE program and establish the terms and conditions governing participation.

Potential Issues: No known issues.

Agencies Involved: NRC and DHS.

Program Office Action: The NRC and DHS are the co-leads for this action. OGC and NSIR are working with DHS on the revised MOU.

Resources: No additional resources are necessary to complete this ongoing action.

Action 6-3		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
OGC, NSIR	Develop strawman to facilitate discussion	Complete
OGC, NSIR	Conduct meetings to discuss draft MOU language	Ongoing
NSIR	Approve and sign MOU	12/31/07

Action 7-1	Storage of Sources	NRC lead
		10/1/09

Task: The NRC should evaluate requiring licensees to review and document the reasons for storing risk-significant sources longer than 24 months and the feasibility of establishing a maximum time limit on the long-term storage of risk-significant sources not in use.

Cite: Chapter 7—Storage of Radioactive Sources

Report Context: No absolute time limit exists for the long-term storage of sources. Several sections of regulations encourage licensees to evaluate storage situations after 24 months. This period is long enough to allow licensees to set sources aside to meet business purposes. Holding a source in storage longer than 24 months usually indicates the lack of a strategy to use or dispose of the source. The NRC should consider a new requirement for licensees to review and document the reasons for storing risk-significant sources longer than 24 months. This would consist primarily of an assessment of the costs of transfer or disposal versus the cost of storage and the licensee's expectation of eventually using the source again. Few risk-significant sources are actually stored for 24 months, so this requirement would be invoked only rarely. However, several benefits relate to making licensees consider why they are storing a risk-significant source and if it is a good time to disposition it. Such a requirement could make licensees more aware of the source's existence, trigger an evaluation of the adequacy of storage conditions, and encourage the use of sound business and regulatory principles that would lead to the removal of sources that should not remain in storage. Implementation of a maximum time limit may create a hardship for some licensees if disposal options for greater than Class C (GTCC) waste are not developed. Once disposal options for GTCC waste exist, the NRC should consider requiring a maximum time limit on the long-term storage of risk-significant sources not in use.

Potential Issues: No known issues.

Agencies Involved: NRC, OAS, stakeholders, and DOE.

Program Office Action: NRC has the lead for this action. FSME will evaluate the need to establish new requirements for the storage of sources. FSME will form a working group to consider the storage issue. OAS and stakeholders should also be engaged. A technical basis will be developed if a decision is made to pursue the issue. This evaluation should be conducted as part of the implementation for Recommendation 9-2 on financial assurance.

Resources: The resources for Recommendation 9-2 include resources for implementing this action. The budget does not include resources for a rulemaking, if necessary. The NRC would budget and prioritize the rulemaking, if pursued. This is a low-priority item.

Action 7-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Form working group to evaluate storage	10/1/08

Action 7-1		
Working Group	Develop plan to conduct evaluation	11/1/08
FSME	Decide on rulemaking	10/1/09

Action 9-1	Greater than Class C Waste	DOE lead
		Ongoing

Task: DOE should continue its ongoing efforts to develop GTCC disposal capability.

Cite: Chapter 9—National System to Provide for the Proper Disposal for Radioactive Sources

Report Context: Currently, no commercial disposal facility will accept GTCC LLRW. Many of the Category 1 and 2 sources would be considered GTCC waste. DOE has initiated the process to develop disposal capability for GTCC LLRW. Current activities center on performing the necessary National Environmental Policy Act analyses of potential disposal alternatives, including development of an environmental impact statement (EIS). As required by Section 631(b)(1) of the EPAct, DOE will submit a report to Congress by August 8, 2006, on the estimated cost and proposed schedule to complete the EIS. Providing disposal options for GTCC waste will have the greatest effect on reducing the total risk of long-term storage for risk-significant radioactive sources. Until disposal options for GTCC LLRW are available, the DOE Office of Research Sponsored Programs (OSRP) will recover any source that presents threats to public health and safety and security. The Task Force encourages DOE to continue its ongoing work to develop GTCC waste disposal capability.

Potential Issues: No known issues.

Agencies Involved: DOE, EPA, and NRC.

Program Office Action: DOE has the lead for this action. EPA is a cooperating agency on the GTCC waste EIS. On July 23, 2007, DOE issued a Notice of Intent to prepare the EIS (Volume 72, page 40135, of the *Federal Register*). The NRC will comment on the draft EIS when issued by DOE.

Resources: No specific resources are necessary for this recommendation. Comment on the draft EIS is part of the routine workload.

Action 10-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Comment on the DOE EIS on GTCC waste when issued for public comment	2nd quarter FY 2008—timing dependent on DOE

Action 10-1	International Harmonization of Import/Export Controls	DOS lead
		Ongoing

Task: The U.S. Government should continue the efforts to promote international harmonization of import and export controls for Category 1 and 2 radioactive sources.

Cite: Chapter 10—Import and Export Controls for Radioactive Sources

Report Context: To date, 90 nations have made a political commitment to work toward following the Code of Conduct, as called for in IAEA 2003 General Conference Resolution GC (47)/RES/7.B. However, only 45 of these countries have made a subsequent political commitment to act in accordance with the supplementary Guidance on Import and Export of Radioactive Sources, pursuant to GC (47)/RES/7.B in 2004. This discrepancy may largely result from Member States' confusion regarding the need for a second commitment. The U.S. Government strongly believes that a second commitment is needed because unlike the Code, whose guidelines are primarily addressed to action on a national basis, the import/export guidance seeks to harmonize multilateral interactions. To harmonize these interactions, each country needs to commit to act in accordance with the guidance and set a date by which it anticipates that it will meet this commitment. As part of the G-8 Sea Island Summit and the United States-European Union Shannon Summit, 29 nations made a political commitment to work towards having effective export controls, as recommended by the guidance, by the end of 2005. In addition, leaders of the Organization for Security and Cooperation in Europe and Asia-Pacific Economic Cooperation made similar commitments as part of their summits. However, some of these countries have not submitted their individual letters of commitment to the IAEA Director General. DOS should continue to press countries that have not already done so to make this commitment. In addition, DOS should continue its work to promote the international harmonization of export and import controls over Category 1 and 2 radioactive sources through multilateral and bilateral forums, conferences, technical meetings, and other meetings to harmonize import/export actions. Finally, the U.S. Government should press for common forms, used in import and export bilateral transactions, to further harmonize the implementation of import and export controls.

Potential Issues: No known issues.

Agencies Involved: DOS, NRC, DOE, EPA, and CIA.

Program Office Action: DOS has the lead for this action. The NRC (IP, NMSS, and FSME) will continue to participate in international conferences on implementation of the Code of Conduct.

Resources: This activity is not specifically budgeted but would be covered by routine activities.

Action 10-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
IP, FSME, NMSS	Participate in international conferences and meetings	Ongoing

Action 10-2	Regulatory Impediments to the Return of Disused Sources	DOE lead
		Ongoing

Task: The U.S. Government should encourage suppliers to provide arrangements for the return of disused sources and examine means to reduce regulatory impediments that currently make this option unavailable.

Cite: Chapter 10—Import and Export Controls for Radioactive Sources

Report Context: Lifecycle management of risk-significant radioactive sources is key to preventing sources from becoming abandoned, lost, or diverted for malicious use. Encouraging suppliers and supplier countries to arrange for the return of risk-significant sources would provide an outlet for sources at the end of their useful lives. Making this option available is particularly important given the limited disposal options and their high cost. Suppliers could receive encouragement to arrange for the return of sources through work with IAEA, development of a code of practice by suppliers, or other means.

Internationally, the redefinition of sources as "radioactive waste" can impede the return of disused risk-significant sources to manufacturers. Once sources are redefined as waste, they are subject to the regulatory framework that requires rigorous licensing and export/import authorization processes, which makes this source management option unavailable in some cases. In the United States, NRC rules allow for the return of sources without considering the sources to be radioactive waste. Specifically, radioactive waste, as defined in 10 CFR 110.2, "Definitions," does not include radioactive material that is "...contained in a sealed source, or device containing a sealed source, that is being returned to any manufacturer qualified to receive and possess the sealed source or the device containing a sealed source." In adding this exclusion to the definition of radioactive waste, the Commission stated, "This exclusion acknowledges that shipment of used sources to a qualified manufacturer should be handled as expeditiously as possible because these types of shipments help to ensure that used sources are handled in a safe and responsible manner." Additionally, the recent changes to 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," allow for broad licenses that can include the return of the disused risk-significant source as part of a combined import/export license. This may still be an impediment in other countries.

Obstacles to the return of Category 1 and 2 radioactive sources also include the loss of Type B packaging status. Many of the Category 1 and 2 sources must be transported in Type B packages. In the United States, many of the Type B packages were designed several decades ago and do not meet new international standards. Internationally, the grandfathering clause for old designs expired in 2001. In the United States, Type B packages do not have to meet the new design standards until October 1, 2008. After that date, many of the existing Type B packages will no longer be in use. While Type B packages that meet the new standards are available, they are expensive to either lease or buy. The Task Force encourages the agencies involved to examine the regulatory landscape that applies to the return of disused sources to suppliers and to identify and address the obstacles that currently make this option unavailable.

Potential Issues: In the United States, NRC rules allow for the return of sources without

considering the sources to be radioactive waste. A license is required. The availability of Type B packages designed to meet international standards could impact the ability to return sources.

Agencies Involved: DOE, DOS, NRC, and DOT.

Program Office Action: DOE has the lead for this item. The NRC would participate as appropriate. IP will review and approve import licenses for source return, as appropriate. NMSS will review and approve new package designs, as appropriate.

Resources: This activity is not specifically budgeted; package reviews and licensing reviews are part of routine activities.

Action 10-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
IP	Review import license applications	TBD upon submittal
NMSS	Review new package design applications	TBD upon submittal

Action 10-3	Discourage Export of Sources as an Alternative to Disposal	NRC/DOS lead
		Ongoing

Task: The Task Force suggests the use of education and the creation of incentives to discourage the export of used Category 1 and 2 radioactive sources as an alternative to disposal.

Cite: Chapter 10—Import and Export Controls for Radioactive Sources

Report Context: A number of developing countries have voiced concern that facilities in developed nations may export used risk-significant sources and devices, such as teletherapy units, to the developing world as an alternative to disposal. While the donation and sale of used sources and devices are legitimate and essential avenues for many countries to acquire life-saving therapy and diagnostic capabilities, these practices can also result in lingering safety and security concerns since the recipient facilities and importing countries may not have the means for proper storage, conditioning, and disposal of high-risk sources at the end of their useful lives. Implementation of the new import/export controls in the United States and other countries will help address this issue. The importing country will need to consent to the import of the risk-significant radioactive material, as many of the devices contain Category 1 levels of radioactive material. Using incentives and education to discourage this practice would also help address this problem. One option would be to support the voluntary development of a code of ethics or practice by suppliers to help guide decisions on the resale or donation of used sources, especially to entities in the developing world.

Potential Issues: No known issues.

Agencies Involved: NRC, DOS, DOE, HHS, and EPA.

Program Office Action: The NRC and DOS are co-leads for this item. As part of the review of export licenses, IP considers the approval or authorizations issued by the foreign country. For Category 1 sources, government-to-government consent is necessary before the source can be approved for export to the foreign country. The NRC will participate in other activities as appropriate.

Resources: This activity is not specifically budgeted but would be covered by routine activities.

Action 10-3		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
IP	Review requests for export licenses	TBD upon submittal

Action 10-4	Interagency Evaluation of Import Requests	NRC lead
		Complete

Task: The U.S. Government should improve the interagency evaluation of recipient authorization and recipient country controls to prevent the fraudulent acquisition of risk-significant sources exported from the United States.

Cite: Chapter 10—Import and Export Controls for Radioactive Sources

Report Context: Paragraph 25 of the Code of Conduct states the following:

> Every State intending to authorize the export of radioactive sources in Categories 1 and 2 of Annex 1 to this Code should consent to its export only if it can satisfy itself insofar as practicable, that the receiving State has authorized the recipient to receive and possess the source and has the appropriate technical and administrative capability, resources and regulatory structure needed to ensure that the source will be managed in a manner consistent with the provisions of this Code.

In addition, the supplementary Guidance on Import and Export of Radioactive Sources states that, in deciding whether to authorize an export of such a source, the exporting State should consider the following elements, based on available information:

- whether the recipient has been engaged in clandestine or illegal procurement of radioactive sources
- whether an import or export authorization for radioactive sources has been denied to the recipient or importing State, or whether the recipient or importing State has diverted for purposes inconsistent with the Code any import or export of radioactive sources previously authorized
- the risk of diversion or malicious activities involving radioactive sources (paragraphs 8c and 11c)

Finally, under 10 CFR Part 110, the principal criterion for approving exports of material under Appendix P, “Category 1 and 2 Radioactive Material,” is a finding that the export is not inimical to the common defense and security of the United States. The noninimicality finding is relevant to both the nuclear proliferation significance of exports and the related security concerns of potentially harmful radioactive material being used for malicious purposes.

The NRC, DOE, and DOS are currently conducting the review called for in the above documents. However, additional information gained from leveraging the knowledge and expertise of additional Government entities could provide a more comprehensive information base to facilitate the U.S. Government in making a more informed decision on whether to authorize an export.

Currently, the interagency group informally makes an evaluation based on a number of criteria, including a country's nonproliferation credentials, whether it is on the embargoed countries list, its export history, and its progress in IAEA assistance programs, to the extent information is publicly available or provided by the country. Verifying the legitimacy of some end users is difficult at times, and additional information could be useful in this review process. The decision-making process should, where appropriate, take greater advantage of the extensive knowledge base offered by the various agencies. This is particularly important in light of today's security concerns.

Bringing in additional existing expertise and resources could be beneficial. This interagency group could periodically review and share relevant trade, end user, and country information. Agencies involved in the export licensing process should consider any information provided by the working group, but without allowing such information to unduly hamper legitimate trade or unduly lengthen the review process. Specific actions that could be considered include the following:

- Request additional information, as appropriate, from potential recipient governments regarding the safe transport, security, handling, and storage of the exported risk-significant radioactive material in the country.

- Make greater use of existing U.S. Government resources (e.g., working through the DOC, DOE, DOS, and the NRC), as appropriate, to share information regarding potential recipient companies to help ensure that the end user is authentic.

- Make greater use of existing U.S. Government resources (e.g., Department of Commerce, DOE, DOS, and the NRC) to better understand the recipient country's security environment, the adequacy of its regulatory controls, and any potential security concerns that may arise during the transport or at the end-use location.

Potential Issues: No known issues.

Agencies Involved: NRC, DOS, DHS, CIA, and DOE.

Program Office Action: The NRC has the lead for this item. IP met with other agencies to discuss the interagency evaluation. No further action is necessary.

Resources: This action is considered complete. No additional resources are necessary.

Action 10-4		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
IP	Meet with other agencies to discuss interagency evaluation—11/16/06	Complete

Action 10-5	Need for Specific Import Licenses	NRC lead
		12/09

Task: The NRC should consider reevaluating the need for a specific license to allow the import of Category 1 and 2 radioactive sources to a U.S.-licensed user.

Cite: Chapter 10—Import and Export Controls for Radioactive Sources

Report Context: Most other industrialized countries implementing the supplementary Guidance on Import and Export of Radioactive Sources do not require a specific import license. Category 1 and 2 sources are imported under a licensee's site license to use and possess the source, as was previously done in the United States. Licensees suggest that the new import/export rules requiring specific import licenses present a significant and costly administrative burden with little value. Requirements for the licensee to notify the NRC of the import could still be in place without requiring a specific import license. This would ensure that the NRC would know of the import and to whom it is destined. The Task Force suggests that the NRC consider reevaluating the need for a specific import license to allow the import of Category 1 and 2 radioactive sources to a U.S.-licensed user.

Potential Issues: No known issues.

Agencies Involved: NRC, DHS, DOS, and DOE.

Program Office Action: The NRC has the lead for this item. IP has discussed these issues with Customs and other impacted stakeholders, reevaluated the comments received on the import/export rule, and evaluated the experience to date on the issuance of specific import licenses. IP has determined that a rulemaking is appropriate to address this issue.

Resources: The budget includes the resources for this activity.

Action 10-5		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
IP	Discuss with Customs and DOS—12/19/06	Complete
IP	Evaluate experience for first year—8/1/06 (SECY-06-0171, "Analysis of 10CFR Part 110, Appendix P Implementation Issues")	Complete
IP	Reevaluate comments received on this issue—8/1/06 (SECY-06-0171)	Complete
IP	Decide on need for specific import license—8/1/06 (SECY-06-0171)	Complete
IP	Provide proposed rule on elimination of specific license to Commission	11/08
IP	Provide final rule on elimination of specific license to Commission	11/09

Action 11-1	National Source Tracking System Data Request Processing Procedure	NRC lead 11/07

Task: The Task Force encourages the National Source Tracking System (NSTS) ICC for National Source Tracking to develop a procedure/policy with guidelines on handling both Government and non-Government requests for information in the NSTS.

Cite: Chapter 11—National Source Tracking System

Report Context: No procedures or guidelines are in place currently that would provide criteria for handling requests for access to NSTS information. At present, each request would need to be handled on a case-by-case basis. The NRC has already received inquires for access to various pieces of information in the database. A procedure or policy is needed to process such requests. The development of the procedure or policy should be an interagency project and should address requests from both Government and non-Government entities. The procedure/policy should address the types of information potential users would need to submit to support a request. The development of such a procedure/policy should not require extensive resources and would likely save resources in the end. Case-by-case reviews generally require more effort to process than those handled according to an established procedure/policy. Case-by-case reviews also leave the agency making the decision open to criticism. The Task Force suggests that the ICC develop the procedure/policy since this committee already exists and will continue to be involved in the NSTS.

Potential Issues: No known issues.

Agencies Involved: NRC, DOS, DOE, DHS, DOT, DOD, EPA, TSA, FBI, DOC, OAS, and CRCPD.

Program Office Action: The NRC has the lead for this item. The ICC, chaired by FSME, is developing a procedure for evaluating the validity of requests for data from the NSTS. Once the ICC approves the procedure, the Commission will receive it for final approval.

Resources: This project is part of routine activities and is already underway. No additional resources are necessary.

Action 11-1		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME (as chair of ICC)	Provide a draft to the ICC	12/07
ICC	Approve draft procedure	6/08

Action 11-2	Program National Source Tracking System To Provide Automatic Daily Updates to U.S. Customs and Border Patrol	NRC lead 12/08

Task: The NRC should consider programming the NSTS to provide automatic daily information to Customs on import/export shipment notifications.

Cite: Chapter 11—National Source Tracking System

Report Context: While the NRC intends to record import/export notifications in the NSTS, the actual requirements for the notifications were not finalized before completion of the NSTS development requirements. The current system requirements do not provide for a daily automatic notification to Customs on shipments of Category 1 or 2 sources that will be entering or exiting the United States. An import/export notification report will be one of the system's routine reports and Customs will receive that information, but Customs will not have direct access to the information through the NSTS. The NRC should consider programming the NSTS to provide an automatic daily notification to Customs with information on any shipments of Category 1 or 2 sources that may be entering or exiting the country within the next 24 hours. An automatic notification would eliminate the human factor aspects and would ensure that Customs officials receive the information in a timely manner. Development of a program and the report format should not require extensive effort, but it will require coordination with Customs officials over the report content and who should receive such notifications. If this cannot be conducted under the current contract for development, the NRC should consider it for inclusion in future modifications.

Potential Issues: Current contract provisions may not allow for changes.

Agencies Involved: NRC, DHS, and contractor.

Program Office Action: The NRC has the lead for this item. FSME will evaluate the programming necessary to provide for automatic notifications to Customs and determine if it is within the current contract.

Resources: The budget currently includes the cost for the NSTS contract.

Action 11-2		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Determine if within current contract	6/08
FSME	Have contractor make programming change or	12/08
FSME	Include in next revision of contract	TBD

Action 11-3	Inclusion of Category 3 Sources in the National Source Tracking System	NRC lead
		12/09

Task: The Task Force suggests conducting a comprehensive analysis on the inclusion of Category 3 sources in the NSTS.

Cite: Chapter 11—National Source Tracking System

Report Context: The Task Force considered whether the NSTS should include Category 3 sealed sources. At this time, neither the NRC nor DOE plans to track Category 3 sources; however, the agencies have not made a final decision on this issue. Many of the stakeholders commenting on the Task Force activities and on the NRC's proposed rule addressed this issue. Because of the interest in this topic, the inclusion of Category 3 sources in the NSTS should be completely analyzed so that an informed final decision can be made. This analysis should address the cost or burden to licensees, the NRC, DOE, and Agreement States if tracking of Category 3 sources were to be required; the benefit that would be obtained and by whom if the information were collected; the potential for unintended consequences, such as a negative impact on NSTS operation; the potential impact to the NRC and Agreement State General Licensee Tracking Systems; and the potential alternatives to tracking Category 3 sources, such as inventory reporting (e.g., capturing inventory reports in the NSTS).

In conducting the analysis, the NRC should engage industry, States, and Federal agencies. This activity would involve considerable resources to implement, but the Task Force believes the effort may be warranted because various parties continue to raise this issue. GAO (GAO-05-967) suggested that there may be a benefit to including Category 3 sources in the NSTS. In its January 2006 position statement, the Health Physics Society recommended inclusion of Category 3 sources if the cost is not prohibitive. The NRC's Office of the Inspector General (OIG-06-A-10) recommended that NRC staff conduct a comprehensive regulatory analysis to assess expanding the materials tracked in the NSTS to include Categories 3, 4, and 5 and bulk material. Category 3 and lower activity sources comprise a major portion of those voluntarily identified as surplus, excess, or unwanted in the commercial sector and that are being collected by OSRP. Additionally, the U.S. metal recycle industry has indicated that Category 3 radioactive sealed sources are those more commonly misplaced or abandoned in industry, resulting in potential contamination of the metal recycling process with operational and financial impacts. The inclusion of Category 3 sources needs to be addressed comprehensively so that the issue can be resolved.

In a June 9, 2006, staff requirements memorandum, the Commission directed the staff to conduct a one-time survey of licensees to obtain information on Category 3 sources and to prepare a proposed rule to include Category 3 data in the NSTS.

Potential Issues: OAS and many licensees have expressed opposition to including Category 3 sources in the NSTS.

Agencies Involved: NRC, DOS, DOE, DHS, DOT, DOD, EPA, TSA, FBI, DOC, OAS, CRCPD, and stakeholders.

Program Office Action: The NRC has the lead for this item. FSME has conducted a one-time survey of licensees authorized to possess Category 3.5 (0.1 of Category 3) sources. FSME staff will analyze the data and prepare a proposed rule that addresses the inclusion of Category 3 data in the NSTS. FSME will need to obtain stakeholder input.

Resources: The FSME budget includes resources for the survey and the rulemaking.

Action 11-3		
Tasked Office	**Breakdown into Subtasks**	**Due Date**
FSME	Prepare survey questions	Complete
FSME	Initiate survey of licensees	Complete
FSME	Preliminary brief analysis of survey data of Category 3.5 sources to Commission	Complete
FSME	Submit proposed rule to Commission	4/08
FSME	Submit final rule to Commission	6/09

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