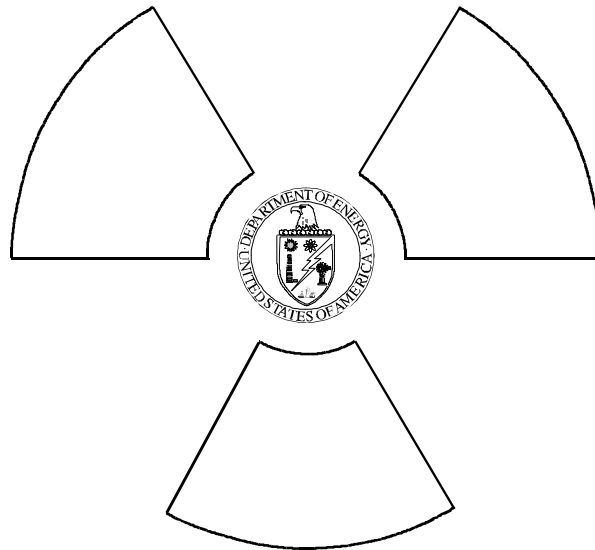


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03-17-99

MANAGEMENT AND ADMINISTRATION OF RADIATION PROTECTION PROGRAMS GUIDE

for use with

**Title 10, Code of Federal Regulations, Part 835,
Occupational Radiation Protection**



**Assistant Secretary for Environment,
Safety and Health**

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ACRONYMS

RPP	radiation protection program
DOE	Department of Energy
CFR	Code of Federal Regulations
RCS	DOE-STD-1098-99, RADIOLOGICAL CONTROL

MANAGEMENT AND ADMINISTRATION OF RADIATION PROTECTION PROGRAMS

1. PURPOSE AND APPLICABILITY

This Guide discusses acceptable methods for ensuring that radiological activities will be managed and administered in accordance with a documented radiation protection program (RPP) that complies with U.S. Department of Energy (DOE) requirements specified in Title 10 of the Code of Federal Regulations (CFR), Part 835, Occupational Radiation Protection (DOE 1998a), hereinafter referred to as 10 CFR 835. This Guide provides cross-references to other Guides, DOE-STD-1098-99, RADIOLOGICAL CONTROL (DOE 1999a), hereinafter referred to as the RCS, DOE directives, and industry consensus standards that provide detailed guidance for implementing specific requirements in 10 CFR 835.

This Guide provides guidance with respect to implementing the provisions for management and administration of RPPs contained in Subpart B of 10 CFR 835. Specific regulatory citations are provided in the body of the Guide.

This Guide amplifies the regulatory requirements of 10 CFR 835 and provides explanations and examples of the basic requirements for managing and administering a documented RPP. The requirements of 10 CFR 835 are enforceable under the provisions of Sections 223(c) and 234A of the Atomic Energy Act of 1954, as amended (*AEC, 1954*).

Except for requirements established by a regulation, contract, or administrative means, the provisions in this Guide are DOE's views on acceptable methods of program implementation and are not mandatory. Conformance with this Guide will, however, create an inference of compliance with the related regulatory requirements. Alternate methods that are demonstrated to provide an equivalent or better level of protection are acceptable. DOE encourages its contractors to go beyond the minimum regulatory requirements and to pursue excellence in their programs.

The word "shall" is used in this Guide to designate requirements from 10 CFR 835. Compliance with 10 CFR 835 is mandatory except to the extent an exemption has been granted pursuant to 10 CFR 820, Procedural Rules for DOE Nuclear Activities (DOE 1997a). The words "should" and "may" are used to denote optional program recommendations and allowable alternatives, respectively.

This Guide is applicable to all DOE activities that are subject to the requirements of 10 CFR 835.

2. DEFINITIONS

Terms defined in 10 CFR 835 are used in this Guide consistent with their regulatory definitions.

Internal audits: Reviews and evaluations of the content and implementation of the documented radiation protection program conducted by an organization neither responsible nor accountable for developing program content or implementing the program.

Radiation protection program (RPP): The documented program, approved by DOE, including, but not limited to, the plans, schedules, and other measures developed and implemented to achieve and ensure continuing compliance with 10 CFR 835 and to apply the as low as is reasonably achievable (ALARA) process to occupational dose.

3. DISCUSSION

10 CFR 835 establishes specific requirements for the development, content, revision, and approval of the documented RPP for a DOE activity. These requirements include identifying existing and/or anticipated operational tasks and formal plans and measures for maintaining occupational radiation doses ALARA. Guidance provided in the DOE G 441.1 series of Guides, in combination with the provisions of site radiological control manuals developed and implemented consistent with guidance provided by the RCS for those regulatory provisions not addressed by these Guides, provide reasonable assurance that a site RPP will meet the requirements of 10 CFR 835.

The RPP for a specific DOE activity is approved by the cognizant DOE Headquarters Program Office. The RPP is intended to provide DOE reasonable assurance that the DOE activity will be conducted in compliance with the provisions of 10 CFR 835. The RPP also satisfies the requirement for an Implementation Plan found in other DOE directives. Guidance concerning the specific documentation required for DOE approval of RPPs as required in 10 CFR 835.101(f), (g), and (h) is provided in DOE-STD-1082-94, PREPARATION, REVIEW, AND APPROVAL OF IMPLEMENTATION PLANS FOR NUCLEAR SAFETY REQUIREMENTS (DOE 1994a), and by the cognizant DOE Headquarters Program Office.

Program Offices will also provide guidance should DOE need to direct or make modifications to an RPP as provided under 10 CFR 835.101(b). 10 CFR 835 permits changes, additions, or updates to an RPP to become effective without prior DOE approval only if the changes do not decrease the effectiveness of the RPP and the RPP, as changed, continues to meet the requirements of the rule. Proposed changes that decrease the effectiveness of the RPP shall not be implemented without submittal to and approval by DOE (10 CFR 835.101(h)). Guidance regarding the process for submitting and approving changes will be provided by the appropriate DOE Headquarters Program Office.

The RPP is the basis for implementing operational radiation protection program requirements for a DOE activity. A combination of various methods which can be used to achieve regulatory compliance is discussed in this Guide. DOE recognizes that many of the requirements of 10 CFR 835 are not new. Equivalent requirements were previously promulgated in DOE Orders and the DOE Radiological Control Manual, which were implemented under contractual obligations for most DOE activities. Therefore, much of the RPP documentation required to ensure compliance with 10 CFR 835 has already been developed to ensure compliance with contractually-imposed radiation protection standards. DOE recognizes that significant effort was expended in upgrading radiation protection of the work force and does not intend for its contractors to expend significant additional effort to develop and implement a separate, redundant program to satisfy the RPP requirements of 10 CFR 835. The RPP should rely on existing documents, such as the site radiological control manual, contractual agreements, procedures, and memoranda, to effectively administer and manage regulatory commitments. However, the completeness of these existing documents should be verified to ensure that all 10 CFR 835 requirements are satisfied. This Guide provides guidance on the management and administrative aspects of the RPP to achieve and maintain compliance with specific requirements in 10 CFR 835.

Internal audits of the radiation protection program, including examination of program content and implementation, shall be conducted through a process that ensures that all functional elements of the program are reviewed no less frequently than every 36 months (10 CFR 835.102). This Guide discusses the role of an internal audit program in effectively managing and administering an RPP that complies with 10 CFR 835. These internal audits may also be incorporated into quality assurance programs developed under 10 CFR 830.120, Quality Assurance Requirements (DOE 1994b) and/or DOE O 414.1, QUALITY ASSURANCE (DOE 1998b).

Functional elements of a comprehensive RPP are identified and discussed throughout Section IV of this Guide. The specific functional elements for a DOE activity will depend upon the types of radiological work being performed and the radiological hazards present. Other functional elements necessary for an integrated worker health and safety program are not addressed in this Guide, but should be integrated with a radiological control program. These other functional elements include: respiratory protection, radioactive material shipment and receipt, radioactive waste management, and emergency response.

4. IMPLEMENTATION GUIDANCE

The approved RPP ensures that a DOE activity will be in compliance with 10 CFR 835 and should identify the functional elements appropriate for that activity. Additional documentation should be developed and maintained to supplement the approved RPP to demonstrate that an RPP can be effectively managed and administered to achieve compliance with 10 CFR 835.. This documentation typically includes a site radiological control manual developed to the guidance contained in the RCS, as well as detailed implementing procedures, appropriate management policy statements, and technical basis documentation. While this documentation need not be part of the RPP, it should be clearly linked to the compliance commitments contained in the RPP.

DOE has developed technical guidance to support effective implementation of programs to ensure compliance with 10 CFR 835. The RCS was developed to provide detailed guidance on and best practices for line management implementation of DOE's radiation protection requirements. The DOE 441.1 series of Guides provide acceptable methods for achieving compliance with a variety of technical and administrative requirements.

RPP changes may be implemented without prior DOE approval only if the RPP continues to meet 10 CFR 835 requirements and the changes do not reduce program effectiveness (10 CFR 835.101(h)). Due to the wide range of activities subject to 10 CFR 835 and the variety of methods used by these activities to ensure compliance, no specific criteria exist by which DOE may predetermine whether an RPP change results in a reduction in program effectiveness. Factors that should be considered include the impact of the proposed change(s) on:

- radiological conditions in occupied areas;
- individual and collective doses;
- worker awareness of radiological conditions and controls;
- management oversight and control of routine and non-routine radiological work activities;
- sufficiency of area and personnel monitoring programs;
- completeness and retrievability of records;
- radiological control performance indicators;
- adherence to consensus standards; and
- other factors that ensure full implementation of the RPP.

Documentation of the rationale applied to RPP changes implemented without prior DOE approval should be retained for future reference and demonstration of compliance.

The terms "likely" and "potential" have been used judiciously throughout the rule to allow the use of professional judgement and experience in making decisions in specific circumstances and provide the flexibility necessary to implement the regulatory requirements under a broad range of activities. The technical bases and other considerations should be documented when professional judgement is exercised. This documentation should provide sufficient detail to permit individuals who are responsible for implementing and assessing the RPP to clearly understand how regulatory compliance is achieved and maintained. The RCS, Guides, and other DOE technical standards are designed to facilitate development and implementation of a comprehensive RPP

commensurate with the radiological hazards associated with the DOE activity. In addition, consensus standards, such as those developed by the American National Standards Institute (ANSI) and the Health Physics Society (HPS), may provide additional guidance concerning technical issues not specifically addressed by the Guides, RCS, or other DOE technical standards.

4.1 ORGANIZATION AND ADMINISTRATION

The RPP shall include plans, schedules, and other measures for achieving compliance with 10 CFR 835 (10 CFR 835.101(f)). Plans should include establishing the organization and administration of the RPP to ensure that the program is effectively implementing appropriate measures that ensure regulatory compliance can be achieved and sustained. The authority and responsibility for radiation protection should originate at the highest levels of line management and should be emphasized throughout the organization. Ultimately, workers should be aware of their individual responsibilities for radiation protection. Programmatic documentation should be developed to document the organizational and administrative aspects of the RPP.

4.1.1 Administrative Processes

The degree of formality and scope of the associated administrative processes should be commensurate with the radiological hazards encountered and complexity of the associated control measures. More rigorous administrative processes should be implemented for more complex or hazardous DOE activities. Administrative processes should include a hierarchy of documents that clearly and unambiguously delineate management policies, requirements, expectations, and objectives for the RPP. This documentation should typically include the following:

- **Policy statement:** The policy statement should articulate management's commitment to conduct radiological operations in a manner that will ensure the health and safety of all its employees, contractors, and the general public. This policy statement should be patterned after DOE P 441.1, DEPARTMENT OF ENERGY RADIOLOGICAL HEALTH AND SAFETY POLICY (DOE 1996a).
- **Site-specific radiological control manual or handbook:** This document should be issued and endorsed by senior management for a DOE activity. This manual or handbook should address all functional elements of the RPP for the DOE activity.
- **Procedures:** These documents should provide detailed instructions for implementing various functional elements of the RPP. Responsibilities and actions required of management and workers should be clearly and unambiguously stated. Written procedures shall be developed and implemented as necessary to ensure compliance with 10 CFR 835, commensurate with the radiological hazards created by the activity and consistent with the education, training, and skills of the individuals exposed to those hazards (10 CFR 835.104).

It is not necessary for written procedures to be developed and implemented for all of the requirements of 10 CFR 835. Written procedures should be developed and employed under the following circumstances:

- Worker health and safety are directly affected;
- the expected outcome for the process or operation requires that a specific method be followed;
- the process or operation is infrequently used and competence training cannot assure adequate implementation; or
- to document the approved method to implement specific processes or operations.

In evaluating the need for written procedures, consideration shall be given to the level and extent of the radiological hazards, the complexity of the measures required to achieve compliance, and the education, training and skills of the individuals who must implement those measures (10 CFR 835.104). Under such a regimen, a low hazard activity employing a stable staff of highly educated and skilled workers having demonstrated an advanced knowledge of radiation protection principles and practices could have fewer and less detailed procedures than a higher hazard activity employing a transient workforce with less knowledge of radiation protection practices and principles. The series of Guides written for 10 CFR 835 (DOE G 441.1 series) provide additional guidance regarding specific procedural aspects of the RPP.

- Technical basis documents: Document decisions and approaches used to achieve regulatory compliance, such as those decisions where professional judgement has been exercised. The document should include supporting analyses and justifications sufficient to demonstrate that regulatory compliance can be achieved and maintained. The 441.1 series of Guides contain specific recommendations for documenting the technical basis for various RPP functional elements.

10 CFR 835 specifies the frequency for performing certain activities. Internal audits shall be conducted on a 36 month cycle (10 CFR 835.102); radiation safety training shall be conducted every twenty four months (10 CFR 835.901(e)); and accountable sealed radioactive sources shall be inventoried and leak tested every six months (10 CFR 835.1202(a) and (b)). DOE expects that those entities responsible for ensuring compliance with the rule will undertake those measures necessary to perform the required activities within the prescribed time frame (e.g., if a sealed radioactive source is leak tested on January 15, DOE would expect the subsequent leak test to be performed on or before July 15 of the same year). 10 CFR 835.3(e) allows a grace period of up to 30 days when operational or scheduling considerations preclude adherence to the required schedule (e.g., the leak test could be performed no later than August 14 of the same year). If the provisions of 10 CFR 835.3(e) are exercised, documentation of the schedule deviation should be developed and include a discussion of the specific activity involved and the reason for the schedule deviation. Schedule extensions beyond the 30 day grace period can only be granted through the regulatory exemption process under 10 CFR 820.62.

4.1.2 Radiological Control Organization

A radiological control organization should be established to support line managers and workers. To function effectively, the radiological control organization should be independent of the line organizational element responsible for production, operation, or research activities, and should have an equivalent reporting level. Radiological control organization function is discussed in detail in the RCS. Other organizational schemes that allow effective compliance with the standards set forth in 10 CFR 835 should be considered to address site- or facility-specific needs.

4.1.3 Education, Training, and Skills

Individuals responsible for developing and implementing measures necessary for ensuring compliance with the requirements of 10 CFR 835 shall have the appropriate education, training and skills to discharge these responsibilities (10 CFR 835.103). These individuals can include technical and management personnel within the radiological control organization, independent assessors, and line managers responsible for radiological work activities. In addition, 10 CFR 830.120(c)(ii), Quality Assurance Criteria, specifies that nuclear facility personnel shall be trained and qualified to ensure they are capable of performing their assigned work.

DOE previously issued requirements and guidance with regard to education, training, and skills for many categories of personnel, including individuals responsible for developing and implementing measures necessary for ensuring compliance with the requirements of 10 CFR 835. Some of these requirements are addressed in DOE 5480.20A, PERSONNEL SELECTION, QUALIFICATION, AND TRAINING REQUIREMENTS FOR DOE

NUCLEAR FACILITIES (DOE 1994c). This order establishes training and qualification requirements for technical professionals and management personnel operating defense nuclear facilities. While these requirements are not mandatory for all DOE facilities, this information may be useful for all DOE facilities in developing training programs and standards for the education, training, and skills appropriate for personnel to achieve compliance with the requirements of 10 CFR 835.103 and 10 CFR 830.120(c)(ii).

Key radiation protection positions are identified in DOE STD-1107-97, KNOWLEDGE, SKILLS AND ABILITIES FOR KEY RADIATION POSITIONS AT DOE FACILITIES (DOE 1997b). This document supplements the requirements discussed above by synthesizing guidance from several source documents into a single reference. DOE STD-1107-97 describes the level of knowledge, skills, and abilities for personnel in key radiation protection involved with DOE activities. The approach taken in DOE STD-1107-97 reinforces the DOE's emphasis on establishing a system of criteria for key radiation protection positions that reflects the increasing levels of education, training, and skills needed for positions of increasing responsibility. The information contained in this standard should be strongly considered when evaluating the education, training, and skills of personnel in key radiation protection positions.

The standards in DOE 5480.20A and DOE STD-1107-97 are based on DOE, Nuclear Regulatory Commission, and related industry standards and provide an acceptable method for achieving compliance with the requirements of 10 CFR 835.103.

DOE STD-1107-97 includes radiological control technicians (RCTs) in the list of key radiation protection positions. While 10 CFR 835 does not establish specific requirements for RCT training, DOE considers the typical job functions associated with RCTs to be critical in implementing an acceptable RPP. These typical job functions include: prescribing and implementing radiological work controls, performing radiological monitoring, responding to radiological incidents, or evaluating radiological conditions in the workplace. Individuals performing these functions shall meet the provisions of 10 CFR 835.103. Chapter 6, Part 4, of the RCS discusses the essential elements of RCT training and qualification, including qualification standards, oral examination boards, and continuing training. In support of these elements, DOE has developed and maintains the core course for RCTs. DOE considers the DOE-developed core course for RCTs, augmented with site specific training, an acceptable level of training for individuals performing the typical job functions associated with RCTs. As is the case with using any of the DOE-developed training courses, sites need to evaluate the individual's job functions and ensure the adequacy of the training provided.

To ensure that the work performed by RCTs receives the appropriate level of review and evaluation, it is important that RCT Supervisors receive a higher level of training and maintain a higher level of knowledge than those expected of RCTs. Chapter 6, Part 4 of the RCS also provides guidance on the essential elements of RCT Supervisor training and qualification, including continuing training and oral examination boards.

DOE developed and implemented core courses to enhance the content of training provided to general employees, radiological workers, and radiological control technicians across the DOE complex and bring these core training programs up to a standard consistent with the commercial industry. The use of the core courses is not mandatory. However, these courses should strongly be considered as a basis for developing and implementing radiation safety and radiological control technician training programs. Additional guidance regarding compliance with the Subpart J requirements is provided in DOE G-441.1-12, RADIATION SAFETY TRAINING (DOE 1999b).

DOE has also sponsored development of additional training courses and guidance. DOE strongly encourages its operating entities to implement these courses and guidance. These courses and guidance, when augmented with site specific information and appropriately revised to reflect the most current regulatory requirements, provide acceptable approaches for providing radiation safety training or training for individuals responsible for developing and implementing measures necessary for ensuring compliance with the rule. These courses include:

DOE/EH-0423 - RADIOLOGICAL CONTROL MANUAL TRAINING FOR MANAGERS (DOE 1994d)
DOE/EH-0424 - HIGHER LEVEL TRAINING FOR SUPERVISORS (DOE 1994e)
DOE/EH-0425 - PLUTONIUM FACILITIES TRAINING (DOE 1994f)
DOE/EH-0449 - RADIOLOGICAL ASSESSOR TRAINING - FUNDAMENTAL RADIOLOGICAL CONTROL (DOE 1995a)
DOE/EH-0450 - RADIOLOGICAL ASSESSOR TRAINING - APPLIED RADIOLOGICAL CONTROL (DOE 1995b)
DOE-HDBK-1105-96 - RADIOLOGICAL SAFETY TRAINING FOR TRITIUM FACILITIES (DOE 1996b)
DOE-HDBK-1106-97 - RADIOLOGICAL CONTAMINATION CONTROL TRAINING FOR LABORATORY RESEARCH (DOE 1997c)
DOE-HDBK-1108-97 - RADIOLOGICAL SAFETY TRAINING FOR ACCELERATOR FACILITIES (DOE 1997d)
DOE-HDBK-1109-97 - RADIOLOGICAL SAFETY TRAINING FOR RADIATION-PRODUCING (X-RAY) DEVICES (DOE 1997e)
DOE-HDBK 1110-97 - ALARA TRAINING FOR TECHNICAL SUPPORT PERSONNEL (DOE 1997f)
DOE-HDBK-1113-98 - RADIOLOGICAL SAFETY TRAINING FOR URANIUM FACILITIES (DOE 1998c)
(No number) - RADIOLOGICAL SUPPORT PERSONNEL TRAINING GUIDE (DOE 1995c)

4.1.4 Internal Audit and Self Assessment

Internal audits and self assessments are two of the numerous checks and balances needed in an effective RPP. Internal audits of the RPP, including examination of program content and implementation, shall be conducted through a process that ensures that all functional elements of the program are reviewed no less frequently than every 36 months (10 CFR 835.102). The RCS discusses how assessments, including internal audits, provide independent feedback to senior line managers concerning the implementation of the RPP.

An audit plan should be developed that identifies the functional elements of the RPP and the schedule for review to ensure that over a 36 month period, all of the functional elements are reviewed. Internal audits should be conducted on a continuing basis. DOE cautions against conducting a single comprehensive internal audit of the entire RPP once every three years. DOE does not believe that such an approach is effective in assuring that a DOE activity will be conducted in conformance with its approved RPP. DOE recommends that, at a minimum, an annual, broad scope audit of the program be conducted. Under this approach, the audit plan would identify each functional element to be reviewed during the annual audit and ensure that all functional elements would be reviewed during a 36 month cycle. Thus, the RPP is under continuing review and deficiencies can be identified and corrected in a timely manner.

The functional elements of a comprehensive RPP are discussed in this Guide. All of these functional elements may not be applicable to a specific DOE activity, but should be selected based upon the type of radiological work being performed and the radiological hazards encountered.

Internal audits should be conducted by individuals who are organizationally independent from the organizations responsible for developing and implementing the RPP.

4.2 RPP FUNCTIONAL ELEMENTS

This section identifies the programmatic functional elements of a comprehensive RPP. For each element, the table below identifies the applicable regulatory provisions and recommended guidance document(s) which is useful in achieving compliance with these provisions.

Functional Element	Regulatory Provision	Guidance Document
1. Organization and Administration	10 CFR 835, Subpart B	Section 4.1 of this Guide
2. ALARA Program	10 CFR 835.101(c), Subpart K	DOE G 441.1-2, OCCUPATIONAL ALARA PROGRAM GUIDE (DOE 1999c)
3. External Dosimetry Program	10 CFR 835.401 (a), 402(a), (b)	DOE G 441.1-4, EXTERNAL DOSIMETRY PROGRAM GUIDE (DOE 1999d)
4. Internal Dosimetry Program	10 CFR 835.401(a), 402(c), (d)	DOE G 441.1-3, INTERNAL DOSIMETRY PROGRAM GUIDE (DOE 1999e)
5. Area Monitoring and Control		
a. Area Radiation Monitoring	10 CFR 835.401(a)	DOE G 441.1-4, EXTERNAL DOSIMETRY PROGRAM GUIDE
b. Airborne Radioactivity Monitoring	10 CFR 835.209, 401(a), 403	DOE G 441.1-3, INTERNAL DOSIMETRY PROGRAM GUIDE DOE G 441.1-8, AIR MONITORING GUIDE (DOE 1999f)
c. Contamination Monitoring and Control	10 CFR 835.401(a), Subpart L	DOE G 441.1-9, RADIOACTIVE CONTAMINATION CONTROL GUIDE (DOE 1999g)
d. Instrument Calibration and Maintenance	10 CFR 835.401(b)	DOE G 441.1-7, PORTABLE MONITORING INSTRUMENT CALIBRATION GUIDE (DOE 1999h)
6. Radiological Controls		
a. Radiological Work Planning	10 CFR 835.501(d), 1001(b), 1003	DOE-STD-1098-99, RADIOLOGICAL CONTROL
b. Entry and Exit Controls	10 CFR 835, Subpart F	DOE-STD-1098-99, RADIOLOGICAL CONTROL DOE G 441.1-5, RADIATION-GENERATING DEVICES GUIDE (DOE 1999i)

Functional Element	Regulatory Provision	Guidance Document
c. Radiological Work Controls	10 CFR 835, Subpart F, 1003	DOE-STD-1098-99, RADIOLOGICAL CONTROL DOE G 441.1-5, RADIATION-GENERATING DEVICES GUIDE
d. Posting and Labeling	10 CFR 835, Subpart G	DOE G 441.1-10, POSTING AND LABELING FOR RADIOLOGICAL CONTROL GUIDE (DOE 1998j)
e. Release of Materials and Equipment	10 CFR 835.1101	DOE G 441.1-9, RADIOACTIVE CONTAMINATION CONTROL GUIDE
f. Sealed Radioactive Source Accountability and Control	10 CFR 835, Subpart M	DOE G 441.1-13, SEALED RADIOACTIVE SOURCE ACCOUNTABILITY AND CONTROL GUIDE (DOE 1999k)
7. Emergency Exposure Situations	10 CFR 835.1301, 1302	DOE O 151, COMPREHENSIVE EMERGENCY MANAGEMENT (DOE 1996c) and Guides
8. Nuclear Accident Dosimetry	10 CFR 835.1304	DOE G 441.1-4, EXTERNAL DOSIMETRY PROGRAM GUIDE
9. Records	10 CFR 835, Subpart H	DOE G 441.1-11, OCCUPATIONAL RADIATION PROTECTION RECORD-KEEPING AND REPORTING GUIDE (DOE 1999l)
10. Reports to Individuals	10 CFR 835, Subpart I	DOE G 441.1-11, OCCUPATIONAL RADIATION PROTECTION RECORD-KEEPING AND REPORTING GUIDE DOE O 232.1A, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (DOE 1997g)
11. Radiation Safety Training	10 CFR 835, Subpart J	DOE G 441.1-12, RADIATION SAFETY TRAINING GUIDE

5. REFERENCES

AEC (Atomic Energy Commission) 1954. U.S. Atomic Energy Act of 1954, as amended. Public Law 83-703 (68 Stat. 919), Title 42 U.S.C., Section 2011.

DOE (U. S. Department of Energy) 1994a. DOE-STD-1082-94, PREPARATION, REVIEW, AND APPROVAL OF IMPLEMENTATION PLANS FOR NUCLEAR SAFETY REQUIREMENTS, dated 10-94. Washington, D.C.

DOE 1994b. 10 CFR 830.120, U.S. Department of Energy, Quality Assurance Requirements. 59 FR 15843, *Federal Register*, Vol. 59, No. 65, dated 4-4-94. Washington, D.C.

DOE 1994c. DOE 5480.20A, PERSONNEL SELECTION, QUALIFICATION, AND TRAINING REQUIREMENTS FOR DOE NUCLEAR FACILITIES, dated 11-15-94. Washington, D.C.

DOE 1994d. DOE/EH-0423, RADIOLOGICAL CONTROL MANUAL TRAINING FOR MANAGERS, dated 9-94. Washington, D.C.

DOE 1994e. DOE/EH-0424, HIGHER LEVEL TRAINING FOR SUPERVISORS, dated 9-94. Washington, D.C.

DOE 1994f. DOE/EH-0425, PLUTONIUM FACILITIES TRAINING, dated 9-94. Washington, D.C.

DOE 1995a. DOE/EH-0449, RADIOLOGICAL ASSESSOR TRAINING - FUNDAMENTAL RADIOLOGICAL CONTROL, dated 1-95. Washington, D.C.

DOE 1995b. DOE/EH-0450, RADIOLOGICAL ASSESSOR TRAINING - APPLIED RADIOLOGICAL CONTROL, dated 1-95. Washington, D.C.

DOE 1995c. RADIOLOGICAL SUPPORT PERSONNEL TRAINING GUIDE. Washington, D.C.

DOE 1996a. DOE P 441.1, DEPARTMENT OF ENERGY RADIOLOGICAL HEALTH AND SAFETY POLICY, dated 4-26-96. Washington, D.C.

DOE 1996b. DOE-HDBK- 1105-96, RADIOLOGICAL SAFETY TRAINING FOR TRITIUM FACILITIES, dated 12-96 Washington, D.C.

DOE 1996c. DOE O 151, COMPREHENSIVE EMERGENCY MANAGEMENT, dated 8-21-96. Washington, D.C.

DOE 1997a. 10 CFR 820, U. S. Department of Energy. Procedural Rules for DOE Nuclear Activities. 62 FR 52479 *Federal Register*, Vol. 62, No. 195, dated 10-8-97. Washington, D.C.

DOE 1997b. DOE STD-1107-97, KNOWLEDGE, SKILLS, AND ABILITIES FOR KEY RADIATION PROTECTION POSITIONS AT DOE FACILITIES, dated 1-97. Washington, D.C.

DOE 1997c. DOE-HDBK-1106-97, RADIOLOGICAL CONTAMINATION CONTROL TRAINING FOR LABORATORY RESEARCH, dated 2-97. Washington, D.C.

DOE 1997d. DOE-HDBK-1108-97 RADIOLOGICAL SAFETY TRAINING FOR ACCELERATOR FACILITIES, dated 3-97. Washington, D.C.,

DOE 1997e. DOE-HDBK-1109-97, RADIOLOGICAL SAFETY TRAINING FOR RADIATION-PRODUCING (X-RAY) DEVICES, dated 8-97. Washington, D.C.

DOE 1997f. DOE-HDBK-1110-97, ALARA TRAINING FOR TECHNICAL SUPPORT PERSONNEL, dated 10-97. Washington, D.C.

DOE 1997g. DOE O 232.1A, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION, dated 7-21-97. Washington, D.C.

DOE 1998a. 10 CFR 835, U.S. Department of Energy, Occupational Radiation Protection. 63 FR 59662, *Federal Register*, Vol. 63, No. 213, dated 11-4-98. Washington, D.C.

DOE 1998b. DOE O 414.1, QUALITY ASSURANCE, dated 11-24-98. Washington, D.C.

DOE 1998c. DOE-HDBK-1113-98, RADIOLOGICAL SAFETY TRAINING FOR URANIUM FACILITIES, dated 2-98. Washington, D.C.

DOE 1999a. DOE-STD-1098-99, RADIOLOGICAL CONTROL, under development at time of publication. Washington, D.C.

DOE 1999b. DOE G 441.1-12, RADIATION SAFETY TRAINING GUIDE, dated 3-17-99. Washington, D.C.

DOE 1999c. DOE G 441.1-2, OCCUPATIONAL ALARA PROGRAM GUIDE, dated 3-17-99 Washington, D.C.

DOE 1999d. DOE G 441.1-4, EXTERNAL DOSIMETRY PROGRAM GUIDE, dated 3-17-99. Washington, D.C.

DOE 1999e. DOE G 441.1-3, INTERNAL DOSIMETRY PROGRAM GUIDE, dated 3-17-99. Washington, D.C.

DOE 1999f. DOE G 441.1-8, AIR MONITORING GUIDE dated 3-17-99. Washington, D.C.

DOE 1999g. DOE G 441.1-9, RADIOACTIVE CONTAMINATION CONTROL GUIDE, under development at time of publication. Washington, D.C.

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DOE 1999j. DOE G 441.1-10, POSTING AND LABELING FOR RADIOLOGICAL CONTROL GUIDE, under development at time of publication. Washington, D.C.

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DOE 1999l. DOE G 441.1-11, OCCUPATIONAL RADIATION PROTECTION RECORD-KEEPING AND REPORTING GUIDE, under development at time of publication. Washington, D.C.

**UNITED STATES
DEPARTMENT OF ENERGY**

Office of Worker Protection Programs and Hazards Management (EH-52/270CC)
19901 Germantown Road, Germantown, MD 20874-1290

Request for Changes to
**MANAGEMENT AND ADMINISTRATION
OF RADIATION PROTECTION PROGRAMS GUIDE**
(Use Multiple Pages as Necessary)

Page No. _____

Section No. _____

Paragraph No. _____

Facility Requesting Change

Contact Person

Telephone Number - Fax Number

Description of Change Request:

Suggested Specific Word Changes:

EH-52 Technical Staff Contact:
Joel L. Rabovsky
(301) 903-2135

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