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Project Manager's Handbook

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**Associate Directorate of Projects
Office of Nuclear Reactor Regulation**

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ABSTRACT

This Project Manager's Handbook has been prepared by the Associate Directorate of Projects to describe the role of the project manager in the regulatory process, and to provide guidance and a comprehensive ready reference for the functions and responsibilities of the project manager.

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PREFACE

The purpose of this handbook is (1) to provide an overview of all directives pertinent to the function of the project manager (PM) in the Office of Nuclear Reactor Regulation (NRR) and (2) to document current practices associated with the PM's function. The U.S. Government Printing Office Style Manual (1984 edition) provided editorial guidance insofar as recent practice in editing.

Revision 1 of the handbook (dated March 1989) completely replaces Revision 0, which was published in May 1985. By memorandum dated December 29, 1988, the Associate Director for Projects appointed a five-person committee to be responsible for and to have the authority for the periodic rewrite of the handbook. The members are: Tim Colburn, Don Fischer, Ken Heitner, Jan Norris, and Peter Tam (chair). The memorandum also set forth the philosophy for preparing revisions of this handbook.

The committee plans to issue Revision 2 in the next few months and is currently working on a list of topics to be incorporated into that revision. Those topics are deliberately not included in Revision 1, mainly because of their preliminary nature, or lack of currently definable guidance.

Comments on this revision (Rev. 1), or suggestions for future revisions should be directed to the chairman of the committee.

Revision 1 work was done under TAC 72000. All associated historical documents may be accessed via the TAC number, using SEARCH 8 on the NUDOCS system.

1 INTRODUCTION

In this chapter are described the statutory and other legal authorities from which the Nuclear Regulatory Commission (NRC) functions are derived and the various segments of the NRC organization and their specific functions. Also described is the project manager's (PM's) job, including the technical basis for decisions. A general chronology associated with the processing of licensing applications, license amendment requests, orders for modification of license, exemption requests, and relief requests is included as is a description of the continuing review and monitoring of operation throughout a nuclear power plant's lifetime.

1.1 Legal Authorities

The NRC operates under a number of statutory and other legal authorities. In virtually all cases, these authorities are reflected in the Commission's regulations and policy statements or are otherwise built into the regulatory process through existing guidance documents such as regulatory guides, standard review plan sections, or through actions by the review branches in their review of applications. The PM can gain access to documents describing these authorities by contacting the appropriate review branch, the NRC library, or the Office of the General Counsel (OGC).

1.1.1 Atomic Energy Act of 1954

The Atomic Energy Act of 1954 assigned primary responsibilities to the Atomic Energy Commission (AEC), the regulatory body that predated the NRC. Briefly, these responsibilities were

- (1) developing and promoting the peaceful uses of atomic energy
- (2) providing reasonable assurances that such uses as were developed would not result in undue risks to the health and safety of the public

This act has a wide scope, including the licensing and regulation of

- (1) use of radioactive materials and sources in industry, research, and radiography
- (2) reactor fuel fabrication and reprocessing
- (3) subcritical assemblies
- (4) packaging radioactive materials for transport
- (5) construction and operation of research, test, and power reactors
- (6) licensing individual operators

This act provides the basic authority for the continuing review, inspection, and surveillance throughout the plant's lifetime.

In 1957 an amendment to the act was passed that required the AEC to hold public hearings on each application for a license for a production or utilization facility and to publish Advisory Committee on Reactor Safeguards (ACRS) reports on individual reactor license applications. In 1962 an amendment was passed that eliminated the mandatory hearing at the operating license stage and provided for the designation of an Atomic Safety and Licensing Board (ASLB) to conduct hearings on construction permit applications. The public is given an opportunity to request a hearing at the operating license stage.

1.1.2 National Environmental Policy Act of 1969

The National Environmental Policy Act (NEPA) of 1969 declared a national policy that encourages productive harmony between humans and their environment. The principal objective is to build into the NRC decisionmaking process an appropriate and careful consideration of environmental aspects of proposed actions. This act requires environmental statements on major Federal actions affecting the quality of the environment.

In July 1971 the U.S. Court of Appeals in the Calvert Cliffs case interpreted NEPA as requiring the Commission, as the agency with overall responsibility for approving nuclear facilities, to "make an independent evaluation and balancing of certain environmental factors, such as thermal effects, notwithstanding the fact that other Federal or State agencies have already certified that their own environmental standards are satisfied. Benefits must be weighed against environmental costs. Alternatives must be considered which affect this balance." This interpretation influences current environmental reviews.

1.1.3 Energy Reorganization Act of 1974

The Energy Reorganization Act of 1974 separated the promotional functions formerly carried out by the AEC from the licensing and related regulatory functions. The act provided for the creation of NRC. The NRC is delegated authority for licensing and regulation involving all facilities and materials licensed under the Atomic Energy Act of 1954, as amended, including such matters as safeguards, transportation of special nuclear materials, and confirmatory research.

1.1.4 Nuclear Waste Policy Act of 1982

The Nuclear Waste Policy Act (NWPA) of 1982 has (1) set schedules for building high-level nuclear waste repositories, (2) established a mechanism by which licensed facilities pay for building the repositories, and (3) set a procedure that allows States and American Indian tribes to participate in the process of selecting sites. The Department of Energy (DOE) is responsible for selecting sites for repositories and the NRC is responsible for licensing them.

1.1.5 Other Legal Authorities

Compliance with a number of other statutes and executive orders primarily concerned with environmental protection and conservation is required before a facility license can be issued. Those other legal authorities that a PM is most likely to encounter are:

- (1) The Federal Water Pollution Control Act, as amended in 1977, and the Yellow Creek Decision by the Atomic Safety and Licensing Appeal Board (8 NRC 702 (1978)) impose the need for close cooperation among NRC, Environmental Protection Agency (EPA), and the States in processing applications for nuclear power plants.
- (2) The Antiquities Act of 1906, as amended, requires action to be taken to protect historic and scientific values for activities licensed on land owned or controlled by the United States.
- (3) The Historic Sites, Buildings and Antiquities Act of 1935, the Reservoir Salvage Act of 1960, and the Archeological and Historic Preservation Act of 1974 seek to preserve historic or archeological data that might be destroyed or lost as a result of construction of a dam or alteration of terrain caused by federally licensed activities.
- (4) The National Historic Preservation Act of 1966, as amended, requires consideration of the effect of any licensing action on any district, site, building, structure, or object listed in the National Register of Historic Places.
- (5) The Fish and Wildlife Coordination Act of 1934 requires consideration of the effect on fish and wildlife of water impounded, diverted, deepened, or modified.
- (6) The American Indian Religious Freedom Act of 1978 requires that appropriate steps be taken to protect the exercise of traditional native American religions.
- (7) The Endangered Species Act of 1973, as amended, seeks to ensure, with some exceptions, that projects do not jeopardize any endangered species or adversely modify their habitat.
- (8) The Coastal Zone Management Act of 1972 requires coordination with the States for any Federal licensing action that may have a significant effect on a State's coastal zone.
- (9) The Wild and Scenic Rivers Act of 1968 seeks to prohibit licensing of activities that would adversely affect wild, scenic, or recreational rivers.
- (10) The Rivers and Harbors Act of 1899 seeks to preserve the navigability or navigable capability of any waters of the United States.
- (11) The Clean Air Act of 1955 requires that EPA be given an opportunity to comment on environmental statements.
- (12) The Noise Control Act of 1972 requires coordination with EPA, where appropriate, on the adequate control of noise.
- (13) Executive Orders 11988 (1977) and 11990 (1977) seek to ensure proper evaluation and consideration of the effect of human activities on floodplains and wetlands.

1.2 Organization of the Nuclear Regulatory Commission

This section describes the organization of NRC with particular emphasis on those organizations the PM may interact with. In general, interactions between organizations should take place at comparable organizational levels. As an example, in interactions with one of the technical review divisions, the PM would normally interact with the section chief or technical reviewer. If a higher level of contact is needed, the PM should arrange such contact.

The NRC was established on January 19, 1975, replacing the regulatory arm of the AEC. The Commission itself is composed of five members appointed by the President of the United States and confirmed by the Senate. The chairman, designated as such by the President, is the principal executive officer and official spokesman for the Commission.

Among its other duties, the Commission is responsible for licensing and regulating nuclear facilities and materials. These responsibilities include protecting public health and safety, protecting the environment, protecting and safeguarding materials and plants in the interest of national security, and ensuring conformity with antitrust laws. The PM is most likely to contact the Commission when the Commission reviews the PM's project. Individual commissioners are usually contacted through their assistants.

Several staff components report directly to the Commission. Most of the Commission's functions, however, are supervised by the Office of the Executive Director for Operations.

NUREG-0325, "U.S. Nuclear Regulatory Commission Functional Organizational Charts," provides details on NRC's organization.

1.2.1 Office of the Executive Director for Operations

The Office of the Executive Director for Operations (EDO) directs and coordinates the Commission's operational and administrative activities. Programmatic activities are carried out by three program offices reporting to the EDO. They are the Office of Nuclear Reactor Regulation, the Office of Nuclear Material Safety and Safeguards, and the Office of Nuclear Regulatory Research. The five regional offices and a number of staff offices also report to the EDO.

1.2.2 Deputy Executive Directors

Two Deputy Executive Directors assist the EDO in carrying out his duties. The first is the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations, and Research. The second is the Deputy Executive Director for Materials Safety, Safeguards, and Operations Support. (Regional office matters concerning materials safety and safeguards are reported to the latter deputy.)

1.2.2.1 Committee To Review Generic Requirements

The Committee To Review Generic Requirements (CRGR), chaired by the DEDRO, was formed in 1981. This committee is responsible for reviewing requirements and recommending to the EDO approval or disapproval of requirements to be imposed by the NRC staff on one or more reactors.

The CRGR develops means for controlling the number and nature of the requirements placed by NRC on reactor licensees. The objectives of these controls are to eliminate any unnecessary burdens being placed on reactor licensees, reduce the exposure of workers to radiation in implementing some of these requirements, and conserve NRC resources, while at the same time not reducing the level of protection of public health and safety. The controls should ensure that requirements issued by the staff (1) do contribute effectively and significantly to the health and safety of the public and (2) do lead to the use of both NRC and licensee resources in as optimal a fashion as possible in the overall achievement of the protection of public health and safety. Additional details about the CRGR can be found in a letter from W. Dircks to licensees and applicants, dated July 2, 1982 (microfiche 14194 001).

In addition to reviewing regulations containing technical requirements, the CRGR reviews all proposed new or revised regulatory guides, all proposed new or revised standard review plan (SRP) sections, all proposed new or revised branch technical positions, all proposed generic letters, all multiplant orders, all generic "show cause" orders, all generic letters written under 10 CFR 50.54f, all bulletins, all NRC documents dealing with unresolved safety issues, and all new or revised standard technical specifications.

The PM is unlikely to interact directly with the CRGR unless a new technical issue arises that involves more than one plant and requires that a staff position be developed. Such staff positions are usually developed by one of the technical review divisions in the form of a change to the SRP. Procedures for developing new NRC positions are discussed in Section 5.1 of this handbook.

1.2.2.2 Regional Offices

There are five regional offices, each under the direction of a regional administrator, who reports directly to the EDO.

The main responsibilities of the regional offices are inspection and enforcement functions, some reactor operator and nuclear materials licensing, emergency planning, and State relations. It is also current Office of Nuclear Reactor Regulation policy to transfer some reactor license amendment reviews to regional offices to benefit from their expertise and help reduce the licensing action backlog.

1.2.3 Office of Nuclear Reactor Regulation

The Office of Nuclear Reactor Regulation (NRR) licenses and regulates nuclear power reactors, test reactors, and research reactors. NRR reviews license applications to ensure that the proposed facility can be built and operated without undue risk to the health and safety of the public and unacceptable adverse impact on the environment. NRR regulates the safety and environmental aspects of operating reactor facilities during their lifetimes through decommissioning. Reporting directly to the Director of NRR are two associate directors each overseeing a number of NRR divisions, and a Program Management, Policy Development, and Analysis staff.

1.2.3.1 Associate Director for Projects

The Associate Director for Projects (ADP) is responsible to the Director of NRR for overall management of all safety-related and environmental regulatory activities on reactor facilities and on certain reactors exempt from licensing. In this context, overall management includes both the technical and the administrative coordination functions. In particular, the ADP is responsible for issuing evaluations on reactor safety, safeguards, and the environment in connection with reactor license applications and amendments to the license during reactor operation. This includes the issuance and amendment of construction permits (CPs), operating licenses (OLs), and limited work authorizations (LWAs). The ADP also manages the systematic re-review of certain operating reactors and is responsible for the overall reviews of standardized plants and development of standardization policy. The ADP oversees 15 project directorates, separated into two divisions.

1.2.3.2 Associate Director for Inspection and Technical Assessment

The Associate Director for Inspection and Technical Assessment (ADT) is responsible to the Director of NRR for evaluating all aspects of safe operation of nuclear reactors. The main responsibilities are represented by the five divisions under the ADT: Engineering and System Technology, Operational Events Assessment, Reactor Inspection and Safeguards, Radiation Protection and Emergency Preparedness, and Licensee Performance and Quality Evaluation. These five divisions are each further divided into branches representing detailed technical review areas. (Refer to NUREG-0325, "U.S. Nuclear Regulatory Commission Functional Organization Charts," for specifics.)

1.2.4 Office of Nuclear Material Safety and Safeguards

The Office of Nuclear Material Safety and Safeguards (NMSS) is responsible for ensuring public health and safety, protecting national security, and preserving environmental values in the licensing and regulation of facilities and materials associated with the processing, transport, and handling of nuclear materials and the disposal of nuclear waste.

For nuclear power plants, NMSS no longer reviews and assesses safeguards against potential threats, thefts, and sabotage. The Safeguards Branch of the NRR currently does such review. This material is provided to the PM after it has been reviewed for potential safety implications. NRR Office Letter No. 801 provides detailed information.

1.2.5 Office of Nuclear Regulatory Research

The Office of Nuclear Regulatory Research (RES) plans and implements research programs that are deemed necessary for the performance of NRC's licensing and regulatory functions. These programs cover reactor safety areas such as materials behavior, site safety, systems engineering, and the development and assessment of computer codes. Research is also performed on safeguards, health effects associated with the nuclear fuel cycle, environmental impacts of nuclear power, waste treatment and disposal, and transportation of radioactive materials.

In addition, RES develops regulations, guides, and other standards needed for regulating facilities and materials with respect to radiological health and

safety, environmental protection, materials safeguards, reactor physical protection, and antitrust considerations. It also coordinates NRC participation in national and international standards activities.

The PM may occasionally interact with RES to determine the possible impacts of research programs on safety reviews or in the development of regulations and guides or national standards (see Sections 5.2 and 5.3 of this handbook).

1.2.6 Other Offices

The PM receives direct support from the Office of the General Counsel (OGC) in the form of legal advice during the review and evaluation of applications, license amendments, orders, exemptions, and relief requests. OGC formally concurs in certain actions as per NRR Office Letter No. 101. OGC provides the hearing counsel in connection with the preparation for and conduct of public hearings for LWAs, CPs, OLs, and amendments. The OGC assists in the development of legal policy dealing with the licensing of plants, interprets regulations and statutes relevant to NRC activities, and provides legal analyses of those authorities that have an impact on NRC. OGC also provides legal assistance with respect to antitrust matters.

NRR receives general support from a number of other offices. The Office of Administration and Resources Management (ARM) is responsible for the design, development, and implementation of management information and control systems for schedules, manpower, and budgets of program offices; for preparing reports for publication; and for evaluating program performance. ARM provides the mechanism for the reporting and issuance of schedule and status information to the Director of NRR.

In addition, NRR coordinates with the Office of Governmental and Public Affairs for technical liaison with foreign, State, and local governments, as well as with Federal agencies in regard to the regulatory process.

The regional offices disseminate information to all staff personnel on construction and operation activities and related problem areas. The Office for Analysis and Evaluation of Operational Data (AEOD) evaluates operational safety data associated with NRC-licensed activities and provides these analyses to NRR. AEOD's analyses are summarized in performance indicators, which are issued quarterly for all operating reactors. NRR uses this information to continually improve the quality of its regulatory activities.

1.3 Overview of the Project Manager's Functions

This section discusses the overall role of the PM as applicable to the licensing project manager (discussed in Section 2 of this handbook), the operating reactor project manager (discussed in Section 3 of this handbook), and the research reactor project manager (discussed in Section 4 of this handbook). Section 5 of this handbook discusses further general responsibilities applicable to all three types of PMs.

The PM represents NRC to many persons and groups, including the public. This role carries with it a responsibility to perform duties in a manner that brings credit to the NRC.

To fulfill the project management responsibilities within the Associate Directorate of Projects, a PM is assigned to one or more specific projects. When assigned to a licensing review, the PM is called a licensing project manager (LPM). When assigned to an operating reactor, the PM is called an operating reactor project manager (ORPM). When assigned to a research reactor, the PM is called a research reactor project manager (RRPM). In this handbook, the term project manager or PM will be used in discussions that apply to LPMs, ORPMs, and RRPMs.

In most cases, the PM will be "dedicated" to one particular project; work on that project usually takes priority over all other work regularly assigned to that PM. The PM is expected to be familiar with all NRC and licensee correspondence related to the assigned project. This includes inspection reports, safety evaluation reports, generic letters, bulletins, information notices, enforcement correspondence, and licensee submittals. The PM will identify necessary corrective action regarding any NRC action, inaction, or correspondence that is not consistent with licensing and inspection guidance and will ensure that corrective action is taken by the regional offices or appropriate NRR staff. Such corrective action will be initiated after consultation with the technical organization or policy development staff, as appropriate. The EDO will be promptly informed of significant matters.

Communications

The PM is expected to have frequent communications with regional counterparts regarding regional and headquarters activities associated with the assigned project. The PM should attend all regional and headquarters meetings for the assigned project, unless it can be justified otherwise, and ensure that appropriate NRR staff are informed of such meetings. The PM should also inform the appropriate regional personnel of all headquarters meetings to be held with the licensee.

The PM should be aware of all regional and headquarters activities concerning the assigned project. Just as the PM establishes working relationships with headquarters technical review managers and staff, equally close relationships must be established with the managers and staff who will implement inspection activities assigned to NRR headquarters and the regions. NRR expects that the PM will have frequent face-to-face discussions with his/her regional counterparts (particularly the resident inspectors). The PM should make frequent visits to both the regional office and to the site of the assigned project. Of primary importance is the establishment of direct lines of communication with the regional office, the resident inspectors, and the licensee site management in order for the PM to be fully informed about all significant inspection and operational activities regarding the assigned project. NRR Office Letter No. 1200 provides additional guidance in this area.

Technical Reviews

In order to perform reviews and evaluations at a high level, the PM must have both technical knowledge and managerial expertise. In the technical area, the PM must review and understand the efforts of others in highly specialized areas, developing comments and questions in regard to technical criteria and analyses, leading technical discussions, formulating overall technical judgments, and writing technical reports. The PM must direct technically oriented administrative work, and must act as liaison with the applicant's or licensee's managerial

and technical personnel and with contractors at the executive and middle management levels. The PM speaks for NRR on all technical aspects of nuclear facility design and operation as well as environmental impacts. The PM correlates the many facets of both nuclear and conventional technology that may influence the design, construction, and operation of a nuclear facility.

The PM interacts with the applicant's or licensee's top-level technical and supervisory personnel as well as with NRC management communicating highly technical matters relating to the design, construction, operation, site location, and environmental impacts of nuclear power stations. These discussions may not be limited to the specific power stations but may include generic discussions of NRC policies, research programs, environmental matters, and radiation control.

In addition, the PM communicates with top-level personnel and coordinates the efforts of the numerous staff personnel in the many complex disciplines and within both formal requirements and management-approved guidance. With assistance from review personnel and consultants, the PM develops the overall recommendations for action to be taken by the Director of NRR with respect to the many aspects of nuclear facility design and operation.

It is the PM's responsibility to schedule and prepare safety evaluation reports (SERs), supplements to SERs (SSERs), draft environmental statements (DESSs), final environmental statements (FESs), CPs, OLs, license amendments, orders, exemptions, and relief requests, using input provided by the review branches, consultants, and contractors. These reports are made available to the public as the principal staff documents that reflect the extent and results of the review. In addition, the SERs for CP and OL applications are provided to and used by the ACRS in its independent evaluation function. At public hearings for a CP, an OL, or a license amendment, the SER and FES constitute the main body of testimony that the staff presents to the Atomic Safety and Licensing Board (ASLB).

Information Management

The PM is the focal point of information for the project and is the only person who has a view of the total aspects of the project. The PM must know where and from whom to obtain specific information on all technical, legal, and procedural matters. It is the responsibility of a PM to be aware of those people who should possess information about the project, and to obtain that information when required. The PM should be oriented toward early identification of problem areas, both technical and procedural. When potential problem areas are identified, the PM must be ready to formulate or cause others to propose potential solutions for, or evaluations of, consequences. Because of this role as the focal point of information, the PM will be expected to display foresight in regard to the project.

The PM must be ready at all times to inform management about the status, problems, and progress of all aspects of the project. The PM is responsible for transmitting information to and from the applicants, the licensees, and the technical reviewers in a timely manner; for maintaining liaison with OGC with respect to processing license amendments, orders, exemptions, and reliefs; and for handling any technical problems that may affect preparation for a hearing or the hearing itself. The PM is not a passive collector of information but is an active manager of the generation of safety information.

Problem Resolution

A PM must coordinate the activities of other experts, in addition to being a specialist on the project. The PM must work to get the required effort from others in a timely and decisive fashion; this requires a certain quality of leadership, an understanding of management techniques, and an ability to communicate well. A PM must identify differences in viewpoint, and either resolve them outright, resolve them in concert with others in the NRC organization, or request management resolution, as appropriate. The PM resolves the great majority of controversial items through discussions with appropriate staff. The highly technical environment and the many-faceted technical specialties place the PM in the role of achieving resolution by exerting technical leadership, using judgment, rationality, and persuasion rather than unilateral direction or authoritarian command.

The PM must be thoroughly familiar with how various components of NRC work to ensure safety of nuclear plants, in particular, how the resident inspectors (RIs) and region-based specialists fit into the safety picture. Such familiarity can be acquired through any of a number of means: frequent site tours, constant phone contact with the RIs and other specialists, participation in portions of special inspections, taking the NRR course in fundamentals of inspection, and periodic meetings with regional personnel. The PM must exercise care, however, not to attempt to do the work of other NRC personnel without approval by management of the affected NRC components. The PM must be aware that his/her responsibilities are very broad, and that placing special emphasis on certain narrower activities would inadvertently result in unwarranted neglect of others, compromising the quality of the overall regulatory mission of the NRC (see later sections).

Other Duties

In addition to the primary responsibilities in the processing of applications for licenses or license amendments, orders, exemptions, and reliefs, a PM may become involved in various collateral tasks. The PM may be required to answer principal correspondence that includes congressional inquiries and requests for information from concerned citizens. In addition, the PM may be called on to participate in the development of regulations, regulatory guides, or broadened definitions of approach, such as the appendices to 10 CFR 50, especially in areas of his/her particular expertise. The PM may be called on to participate in joint industry/NRC panels, most likely in the area of standards development.

The PM must assure that the activities on a project are carried to the extent needed that has been determined to provide the confidence that all significant concerns and potential problems have been adequately addressed.

In carrying out NRC's objective, the PM must be knowledgeable of the technical information provided by the applicant/licensee. The PM must understand the interactions among components, systems, and structures that constitute the nuclear facility, and their potential effect on the environment. The PM must understand the review and evaluation role and the related scope of reviews performed by each of the responsible review branches, including the interactions between these branches. Further, the PM must completely understand the applicable documents that provide the legal and technical basis for regulatory decisions, as discussed in the following section, and must ensure conformance to

these documents during the conduct of the review process. The PM must also consider in the review the impact of information obtained from reports prepared as a result of field inspections. The PM is the coordinating integrator of highly technical data and must insist on a high level of professionalism in all activities.

The PM is involved with a licensing action from "cradle" to "grave." Although the issuance of a licensing document may be considered to complete a major milestone, the task is not completed until it has been implemented by the licensee/applicant and, in many cases, until some NRC component has verified its completion (see later sections).

The PM serves on the reactor safety team during its response to an accident at the PM's assigned plant. The initial duty during the response will be to brief the NRC management executive team on pertinent facts about the plant, site, and emergency. The PM must always be ready to deliver an immediate briefing, whether in response drills or when an accident does occur.

It is NRR policy to have the PM serve as the focal point of all NRR activities. To emphasize this policy, the Director of NRR has delegated certain signature authority to the PM. Since the delegation of signature authority changes from time to time, it is not possible to give an accurate description here. The PM should consult the latest revision of NRR Office Letter No. 101 on this issue; licensing assistants usually keep a copy of that document for ready access.

1.4 Technical Basis for Regulatory Decisions

In carrying out its functions of protecting the health and safety of the public and protecting the environment, NRC imposes technical requirements on applicants and licensees in a variety of ways. There is a wide variation in the formality of these requirements and in the ways these requirements are communicated to licensees/applicants.

1.4.1 Formal Requirements

Title 10 of the Code of Federal Regulations provides the framework that NRC uses to regulate nuclear power. All requirements imposed on applicants or licensees must have their basis in these regulations. Many of the regulations are of a highly technical nature; they are legal requirements and must be observed.

In addition to the regulations, other formal requirements are imposed by orders, bulletins, certain NRC reports, and by conditions stated in the CP and in the OL. Many requirements are imposed by including them in the CP or OL as the applicant's or licensee's commitments to comply with NRC positions that have been established in guidance documents.

1.4.2 Guidance Documents

Detailed technical guidance giving acceptable methods of meeting the requirements in the regulations is provided to the NRC staff, the nuclear industry, and the public in a number of ways. Examples are regulatory guides, the standard review plan sections (including branch technical positions), the environmental standard review plans, and standard technical specifications. Guidance

is also given in other NRC documents that do not contain requirements. They present solutions and approaches that are acceptable to the staff, but they are not necessarily the only possible solutions and approaches. Applicants recognize, however, that if they propose different solutions and approaches, they must expect longer review times and more extensive questioning in those areas. In practice, applicants comply with most of the guidance. Many guides become formal requirements when they are incorporated into the CP or OL. Perhaps the most important guidance document to the LPM is the standard review plan (NUREG-0800).

Standard Review Plan

The standard review plan (SRP) (NUREG-0800) is prepared to guide staff reviewers in performing safety reviews for CP or OL applications. The principal purpose of the SRP is to ensure the quality and uniformity of staff reviews. The SRP provides a well-defined base from which to evaluate proposed changes in the scope and requirements of reviews for site-specific problems. It is also a purpose of the SRP to make information about regulatory practices widely available and to improve communication with and understanding of the staff review process by interested members of the public and the nuclear power industry.

The safety review is based primarily on the information provided by an applicant in a safety analysis report (SAR). 10 CFR 50.34 of the Commission's regulations requires that each application for a CP for a nuclear facility shall include a preliminary safety analysis report (PSAR) and that each application for a license to operate such a facility shall include a final safety analysis report (FSAR). The SARs must be sufficiently detailed to permit the staff to determine whether the plant can be built and operated without undue risk to the health and safety of the public. Before submitting an SAR, an applicant should have designed and analyzed the plant in sufficient detail to conclude that it can be built and operated safely. The SAR is the principal document in which the applicant provides the information needed to understand the basis upon which this conclusion has been reached.

10 CFR 50.34 describes, in general terms, the information to be supplied in an SAR. The specific information required by the staff for evaluating an application is identified in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants - LWR Edition." The SRP sections are keyed to the standard format, and the SRP sections are numbered according to the section numbers in the standard format.

The SRP covers a variety of site conditions and plant designs. Each section gives the procedures and acceptance criteria for each area of review pertinent to the topic of that section. However, for any given application, the staff reviewer may select and emphasize those particular aspects of the SRP section that are appropriate for the application. In some cases, the major portion of the review of a plant feature may be done on a generic basis with the designer of that feature, rather than in the context of reviews of particular applications from utilities. In other cases, a plant feature may be sufficiently similar to that of a previous plant so that a fresh review of the feature is not needed. For these and other similar reasons, the staff may not carry out in detail all of the review steps listed in each SRP section in the review of every application.

The individual SRP sections address the matters that are reviewed, the basis for review, how the review should be conducted, and the type of conclusions that might be reached. The safety review is performed by approximately 18 primary branches. One of the objectives of the SRP is to identify the review responsibilities of the various branches and to define the sometimes complex relationships among branches. Each SRP section identifies the branch that has the primary review responsibility for that section. In review areas in which the primary branch requires support, the branches that are assigned secondary review responsibilities are also identified in the SRP section. NRR Office Letter No. 800 provides details on this subject.

The SRP provides the basis for performing safety reviews. The uniform implementation of design requirements, criteria, and guidelines contained in the SRP by all NRC staff members ensures that the acceptable level of safety will be maintained during the licensing process. Staff reviewers should neither decrease nor exceed the scope and acceptance criteria of any specific SRP section. If a staff member finds that in order to protect public safety, a requirement is needed that exceeds requirements in the SRP, the staff member should present the matter to management for its review and approval before incorporating it into a review. The handling of such issues is discussed in Section 5.1 of this handbook.

Because the SRP does not contain new review requirements, reviews should be performed as described in the "Review Procedures" section and should address the aspects identified in the "Areas of Review" section. Because the staff review is an audit of the applicant's analysis, the review may emphasize or omit particular aspects of an SRP section, as is appropriate for the application under review. These changes in emphasis are acceptable, provided the reviewer has management approval for them and documents the scope and depth of the review in the SER. Each reviewer is expected to briefly describe in the SER the review actually performed by the NRC staff. Examples of acceptable reasons for deviating from the SRP include: omission because of design similarities to a second unit recently reviewed, increasing emphasis as a result of new developments based on operating experience, or reviewing unique design features that were not considered when the SRP was written.

The SRP is part of a continuing, regulatory-standards-development activity that not only documents current methods of review but also provides a basis for an orderly modification of the review process in the future. It will be changed and updated as the need arises to clarify the content or correct errors, as is discussed in Section 5.1. In addition, proposals to modify the SRP will be considered for matters of major safety significance. A major increase or decrease in safety requirements or scope of review for any SRP section will require approval by the Director of NRR and the Committee to Review Generic Requirements (CRGR).

A current regulation (10 CFR 50.34) requires applicants to document deviations from the SRP. Applications docketed after May 17, 1982 must include an evaluation of the facility according to the SRP in effect on that date or according to the SRP revision in effect 6 months before the docket date of the application, whichever is later.

The Environmental Standard Review Plans

The environmental standard review plans (ESRPs) (NUREG-0555) consist of a series of instructions developed for the NRC staff's environmental review of applications for nuclear power plant construction permits. The ESRPs (1) provide specific instructions to the NRC staff responsible for conducting environmental reviews, (2) provide detailed descriptions of the manner in which the NRC reaches judgments on the environmental impacts caused by construction and operation of nuclear power plants, and (3) specify means for determining the significance of the impacts.

The staff is guided by the ESRPs in its reviews of applications to ensure that

- (1) Data essential to a specific environmental review and subsequent decision-making process will be supplied and reviewed.
- (2) Appropriate consideration, including coordination and consultation, is given to other applicable Federal and State requirements.
- (3) The approach is uniform.
- (4) Important environmental impacts are recognized.
- (5) Each impact assessment will concentrate on reviewing those potential environmental impacts of significance, and analysis of irrelevant data or of insignificant impacts will be minimized.
- (6) The methods to be used for analysis and staff judgments are objective and are based on sound analytical procedures.

The ESRPs have been prepared to embrace the range of environmental factors and site-specific environmental conditions expected for the majority of nuclear power plant applications. It is recognized that conditions will occur from time to time that do not fall within the ESRP outline. The plans have been prepared to permit such conditions to be included in the environmental review.

10 CFR 51 provides the regulatory basis for the ESRPs. 10 CFR 51 is based on Council on Environmental Quality (CEQ) guidelines published in 1973. CEQ has since published regulations that became effective on July 30, 1979 (Title 40 of the Code of Federal Regulations, Parts 1500-1508), which made the 1973 guidelines obsolete. In March 1980 the NRC published a proposed rule to update 10 CFR 51 (45 FR 13739); the final rule was published in the Federal Register in March 1984 (49 FR 9352) and became effective on June 7, 1984.

Standardized environmental monitoring, unusual event reporting, design, operation, and National Pollution Discharge Elimination System change notification requirements are in the environmental protection plan; this plan is attached as Appendix B to an operating license.

Standard Technical Specifications

Guidance documents have been developed that describe standard technical specifications in the safety area. These documents are to be used as a basis for developing plant-specific technical specifications, which then become a part of the license.

Standard safety technical specifications are found in four volumes, one for each reactor vendor. The current volumes are:

- General Electric reactors - NUREG-0123, Revision 3
- Babcock & Wilcox reactors - NUREG-0103, Revision 4
- Combustion Engineering reactors - NUREG-0212, Revision 2
- Westinghouse reactors - NUREG-0452, Revision 4

The PM can get current information on standard safety technical specifications from the Technical Specifications Branch.

1.4.3 Probabilistic Risk Assessment

Probabilistic risk assessment (PRA) techniques are useful tools in nuclear regulation. The Risk Applications Branch has been specifically assigned the responsibility for developing approaches and guidance for the use of PRA by NRR technical review branches.

Traditionally, PRA techniques have been used in the resolution of generic issues, rule making, policy development, backfit analyses, and hearings. Currently, PRA techniques are being increasingly applied to an assortment of licensing and inspection activities, for example, those pertaining to station blackout, the technical specification improvement program, event screening, and the inspection of plant emergency operating procedures. The PM should contact the Risk Applications Branch for advice and assistance when necessary.

1.5 Standardization

An important concept for reducing the cost of the review process and the time such a process takes is the standardization of the design of various systems, components, and structures. The early designs for each nuclear facility were essentially unique. The Commission has encouraged standardization, and the nuclear steam supply system vendors and architect-engineers have developed standardized systems and components. The review process becomes considerably simplified for those portions of a plant that are standard and that have been reviewed in depth previously. This allows the staff to devote its attention primarily to those portions of the plant that have been changed and to the suitability of the site to accommodate the standardized design, and to accept with minimum additional review those parts previously examined and proven during operation.

In addition to the accelerated reviews made possible through the use of standardized designs for portions of plants as described above, the Commission has a policy for review and licensing of standardized designs for nuclear power plants and for major plant systems important to safety. In the Commission's policy statement on standardization (43 FR 38954), provision is made for four procedural options for applicants as follows:

- (1) Under the "reference system" concept, an entire facility design or major parts of it can be identified as a standard design to be used in multiple applications. The review can be performed outside the context of an individual application for a CP or OL. The NRC staff grants its approval in the form of a preliminary design approval (PDA) if the design is not complete, or a final design approval (FDA) if the design is complete to the

extent needed at the OL stage of review. These staff approvals do not constitute Commission approval, although the Commission could review and approve at its option. Earlier PDAs were valid for a period of 3 years, but currently PDAs and FDAs can be issued that are valid for 5 years. If an FDA is based on an earlier PDA, however, it is called an FDA-1 and terminates 3 years after the expiration date of the PDA on which it is based.

A number of PDAs have been issued, such as to the Combustion Engineering standard safety analysis report (CESSAR) and to the General Electric standard safety analysis report (GESSAR). These reports cover Combustion Engineering's nuclear steam supply system and the nuclear island of General Electric's plant.

- (2) The "duplicate plant" concept is used when several utilities apply for CPs or OLs for plants of essentially the same design to be located at different sites and to be operated by either the same or different utilities. Staff approvals take the form of a preliminary duplicate design approval (PDDA) or a final duplicate design approval (FDDA). As in the reference system concept, approvals do not constitute Commission approval.
- (3) The "manufacturing license" concept is used when a number of identical nuclear power plants are manufactured in one location and moved to a different location for operation. The number of units is specified in the license, but cannot exceed 10. The license is valid for 10 years, but the plant design must be revised after 5 years. The manufacturing license constitutes Commission approval.
- (4) The "replicate plant" concept is used when an application is submitted for a plant of essentially the same design as one previously reviewed and accepted by the staff. The earlier staff reviews of the plant being replicated are used to the extent possible in the review process.

Under the standardization policy, as well as in connection with a specific CP application, the Commission policy also states that the size of all new plants accepted for licensing review will be limited to power levels of 1300 megawatts electric or less. In terms of thermal power generation, this corresponds to about 3800 megawatts or less.

The review of interrelationships between standard plants, systems, and subsystems constitutes a major problem in the evaluation and licensing of standardized designs.

Even though the designs for some of the older operating reactors are unique in many respects, many standardized systems and components exist in older reactors. The newer operating plants have an increased number of common systems and features, and there are incentives for maintaining those similarities that exist. If the fuel designs, hardware, and administrative controls are changed frequently in diverse directions at these operating plants, and as the number of operating reactors increases, the administration of the operating licenses will become increasingly complex and less efficient.

The Standardization and Non-Power Reactor Project Directorate handles standardization matters for NRR.

1.6 Project Chronology

NRR's overall regulation of nuclear power plants can be divided into a number of chronological phases. These phases are: submittal and acceptance of the application (docketing), early site review, limited work authorization review, construction permit review, post-CP review, operating license review, regulation of operating reactors, and decommissioning review. Throughout many of these phases, parallel reviews are being conducted to ensure that the NRR's safety, safeguards, environmental, and antitrust requirements are met. A PM plays a major role in the conduct of reviews during virtually all of these phases. See Section 2 of this handbook for details.

1.7 Systematic Assessment of Licensee Performance

The NRC has an integrated program to collect available observations on a 12-month to 18-month basis and to evaluate licensee performance on such observations. The program is called the systematic assessment of licensee performance (SALP) and requires input from the PM. SALP guidance is found in Section 5.19 of this handbook, NRC Manual Chapter 0516, and NRR Office Letter No. 907.

1.8 Decommissioning

No specific plan for decommissioning the plant is required at the time of licensing; however, generic impacts of decommissioning must be evaluated in the environmental impact statement. The Commission's current regulations contemplate detailed consideration of decommissioning near the end of a reactor's useful life. The licensee initiates such consideration at that time by preparing a proposed decommissioning plan. However, decommissioning of the facility may not commence without authorization from the NRC. More information on decommissioning can be found in Section 3.8 of this handbook.

2 RESPONSIBILITIES OF THE LICENSING PROJECT MANAGER

This chapter presents a detailed step-by-step description of the responsibilities of the licensing project manager (LPM) in managing the review and evaluation of construction permit (CP) and operating license (OL) applications. The licensing steps are discussed in chronological order. Additional responsibilities assigned to LPMs that are related to the project review effort are also discussed. Additional LPM responsibilities of a general nature are discussed in Section 5 of this handbook.

2.1 Construction Permit Review

2.1.1 Acceptance Review

Before construction starts on a nuclear power plant, the principals must obtain a construction permit from the NRC. An applicant for a construction permit must first submit antitrust information so the Attorney General of the United States and the NRC staff can begin the review of the antitrust aspects of the new plant. The regulations require that within the next 9 to 36 months, the applicant submit two more packets of information: (1) the environmental report (ER) and site suitability information and (2) the preliminary safety analysis report (PSAR). Either of these two parts may be submitted first, but both parts must be submitted within no more than a 6-month period; the fee, and other general and financial information must be accompany the first submittal that follows the antitrust information.

The PSAR presents the design criteria and preliminary design information for the proposed reactor and comprehensive data on the proposed site. The report also discusses design-basis-accident situations and the safety features that will be provided to prevent accidents and to mitigate the effects of postulated accidents on both the public and the facility's employees.

Some time during the period when the applicant is preparing the application for a construction permit, usually about 6 to 12 months before submittal, the PM organizes a general introductory meeting in the area of the proposed site in order to familiarize the public with the safety and environmental aspects of the proposed application, including the planned location and type of plant, the regulatory process, and the provisions for public participation in the licensing process. Additional public meetings of this kind, that is, those that are conducted specifically for public observation and participation, are held during the course of the reactor licensing process.

When an application is submitted, it is first subjected to an acceptance review by the NRC staff to determine whether it contains sufficient information to satisfy the Commission requirements for a detailed review. If the application is not sufficiently complete, the staff makes specific requests for additional information. The application is formally accepted by NRC only if it meets certain minimum acceptance criteria. The LPM manages this acceptance review.

As soon as an application for a construction permit is received by NRC, copies are placed in the NRC public document room (PDR). As soon as the ER or PSAR or early site suitability information is received, copies are also placed in the public document room in the vicinity of the proposed site (the local public document room or LPDR). Copies of all correspondence and documents relating to the application are placed in both of these locations and are available to the public. Also, the NRC issues a press release announcing receipt of the application. Upon acceptance of the application for a construction permit (a procedure known as "docketing"), copies of the application are sent to Federal, State, and local officials and a notice of its receipt is published in the Federal Register. The licensing assistant can help the LPM decide which officials should get copies.

Shortly after docketing, a notice of a public hearing is published in the Federal Register and in a local newspaper in the vicinity of the proposed site. This notice will state that members of the public have 30 days to petition to intervene in the proceeding.

2.1.2 Early Site Review

In an early site review (ESR), any aspect of the suitability of a site for a nuclear power plant may be reviewed before the design of the plant is submitted. This review allows utilities, State and other government agencies, and others to request that the NRC consider an issue or set of issues to (1) determine the suitability of the site with respect to one or more of the issues, (2) establish a range of site-related plant design and performance constraints acceptable to the NRC, and (3) elicit an NRC staff technical position on methods to analyze one or more unique site issues. This review may be conducted either separately or in conjunction with a CP proceeding.

A review conducted in conjunction with a CP proceeding may involve a public hearing and may result in the issuance of a partial initial decision on the site suitability issues involved. A review in which a CP is not sought does not involve a public hearing and will result in issuance of a staff site report. Where appropriate, applicants for CPs may reference previously issued staff site reports as part of their application.

The use of the early site review procedure is optional with the applicant. If this procedure is chosen, the LPM will manage the review, even though most of the review will be actually performed by the appropriate review branches.

2.1.3 Limited Work Authorization Review

NRC regulations provide that the Director of NRR may authorize limited construction work to be carried out before the construction permit is issued. This authorization is known as a limited work authorization (LWA). The regulations provide for the authorization of two types of LWAs. One type may authorize site preparation work, installation of temporary construction support facilities, excavation, construction of service facilities, and certain other construction not subject to the industry's quality assurance requirements. The second type of LWA may authorize the installation of structural foundations and portions of the safety-related structures up to a level corresponding to plant grade.

An LWA may be granted only after the licensing board has made all of the National Environmental Policy Act (NEPA) findings required by the Commission's regulations for the issuance of a construction permit and has determined that there is reasonable assurance that the proposed site is indeed a suitable location for a nuclear power reactor of the general size and type proposed, from a radiological health and safety standpoint. The second type of LWA may be granted if, in addition to the findings described above, the hearing board determines that there are no unresolved safety issues relating to the work to be authorized.

If the applicant requests an LWA, the Atomic Safety and Licensing Board (ASLB) will schedule hearings on environmental and site suitability matters as soon as practical after issuance of the final environmental statement and will issue a separate initial decision on NEPA and site suitability matters. During this period, the LPM will initiate staff action for issuance of an LWA. The LPM manages the site suitability aspects of the review and must concur in the issuance of the LWA. Accordingly, the LPM should be aware of any significant problem areas that have developed during the technical evaluation of the application that could have a bearing on the issuance of an LWA.

2.1.4 Construction Permit Review Procedures

During the later stages of the acceptance review of the application for a construction permit, the LPM develops a project schedule. Shortly after docketing, the schedule is approved by management, and the appropriate review branches, consultants, and contractors begin the review of the application.

When the review has progressed to the point at which a number of concerns have been identified and documented in draft form, a meeting is usually arranged between members of the staff and their counterparts in the applicant's organization in order to discuss the areas requiring elaboration and to further identify and define the issues. These concerns are formulated as technical questions by each reviewer and, in turn, are reviewed, coordinated, and assembled by the LPM for transmittal to the applicant as a single request for additional information (RAI). If a meeting is needed to discuss certain questions, the RAI may be issued to the applicant as an attachment to a meeting notice.

The staff can divide its review of an application into four principal areas: safety, environment, antitrust, and safeguards. Reviews of these areas generally proceed in parallel. The review of each area is discussed below.

2.1.4.1 Safety Review

After the PSAR has been reviewed by the review branches, the LPM prepares the draft safety evaluation report (SER) from material provided by the various review branches. The draft SER is then reviewed by Office of Nuclear Reactor Regulation (NRR) managers.

Following management approval, copies of the draft SER are sent to the applicant, to people on the service list (including intervenors), to ACRS, and to the public document rooms; open issues and staff positions are identified clearly. This draft SER is then used as a vehicle for resolving the outstanding issues with the applicant. When most of the outstanding issues are resolved, the SER is put in final form and is published as an NRC document in the NUREG

series. The LPM should seek the assistance of a technical editor in the Rules Review and Editorial Section (see Section 6.2.2 of this handbook) in preparing the SER and its supplements.

The SER is reviewed by the ACRS. The ACRS meets with the applicant and the staff, initially at the subcommittee level and usually at the site. Subsequently, the full committee considers the application and meets to discuss the key safety issues. Members of the public may attend the ACRS meetings and may submit written statements before the start of the meeting. Although the public may ask questions at the end of the ACRS meeting, they may not directly participate in the meeting. The ACRS advises the Commission, as required by law, about the conclusions of its independent review. This advice, in the form of an ACRS letter addressed to the Chairman of the Commission, is available to the public through the PDRs and in a press release.

Following the ACRS review, one or more supplemental SERs must be prepared and issued. The supplemental SERs consist of the ACRS letter and the staff's response to the comments contained therein, as well as any other pertinent information that needs to be documented in the public record that was not available when the SER was published, including the resolution of any open issues in the SER.

The SER represents the main body of evidence on safety matters presented at the hearing to support the staff conclusion as to whether or not a construction permit should be granted to the applicant.

For detailed information on preparation of the SER and its supplements, see Sections 2.4.12 through 2.4.14 of this handbook.

2.1.4.2 Environmental Review

An environmental review is performed by the staff and its consultants to evaluate the potential environmental impact of the construction and operation of the proposed plant, as well as to provide comparisons between the benefits to be derived and the possible risk to the environment. If an early site review is requested, it is performed separately from the primary radiological safety review.

Early in the environmental review, the LPM should schedule at least one public meeting near the site to discuss environmental impacts with the applicant. The LPM's project director and an Office of the General Counsel (OGC) representative, as well as the LPM, should attend. The LPM should arrange and conduct the meeting. State and local officials are also usually contacted during this visit. Site visits should be coordinated with the regional office.

After the environmental review has been completed, a draft environmental statement (DES), containing conclusions on environmental matters, is issued. The DES is circulated for review and comments by the appropriate Federal, State, and local agencies as well as by individuals and organizations. After receipt of comments, responses are prepared and included in the final environmental statement (FES) along with any changes in text or conclusions brought about by the comments. The FES is issued to the public. The FES constitutes the staff's primary environmental evidence at the subsequent ASLB hearings.

2.1.4.3 Antitrust Review

Antitrust aspects of a nuclear power plant license application must be considered in the licensing process. The Policy Development and Technical Support Branch (PTSB) of NRR can provide guidance to the LPM. The antitrust information submitted by the applicant is sent to the Attorney General of the United States for advice on whether activities under the proposed license would create or maintain a situation inconsistent with the antitrust laws. Upon receipt, the Attorney General's advice is promptly published and opportunity is provided for members of the public to raise antitrust issues. An antitrust hearing may be held based on the recommendation of the Attorney General or on the petition of an interested party. In any event, the NRC must make a finding on antitrust matters. Antitrust hearings are held separately from hearings on environmental and safety matters.

2.1.4.4 Safeguards Review

A safeguards review of the application is conducted to ensure that nuclear materials are adequately protected from theft and that the plant is adequately protected from sabotage and other threats to its physical security. The safety impacts of the security measures are reviewed in NRR by the Safeguards Branch.

2.2 Public Hearing Process for Construction Permits

A public hearing is required before a CP is issued. The hearing is conducted by a three-member Atomic Safety and Licensing Board (ASLB) appointed from the NRC's Atomic Safety and Licensing Board Panel. The ASLB is composed of one lawyer, who acts as chairperson, and two technically qualified people. The hearing is usually held near the proposed site. The principal participants at the hearing from the NRC staff include OGC case attorneys, the LPM, review personnel, and consultants (if necessary). The hearing may be a combined safety and environmental hearing or, in the case of a split application, separate hearings. The ASLB considers all the evidence that has been presented, as well as findings of fact and conclusions of law filed by the parties, and issues an initial decision. The ASLB decision is subject to review by an Atomic Safety and Licensing Appeal Board and the Commission. A construction permit cannot be issued until it is authorized by the Commission itself.

See Section 5.20 for requirements regarding board notifications.

2.3 Post-Construction Permit Review

One of the principal objectives of the CP review and evaluation effort is to resolve all identified areas of safety concern by imposing requirements on the applicant, or by obtaining from the applicant commitments to submit preliminary design information, design criteria, or alternate approaches that are considered acceptable. The goal of the LPM in this regard is to complete the CP review without any outstanding items. A few safety issues, however, may have been determined by the LPM and management to be reasonably left for resolution during the final design and construction phases of the nuclear facility. These more-difficult safety issues are usually of a generic nature but may occasionally

be specific to the plant. They usually require relatively long-term analysis and development to resolve. These safety issues, including completion dates, should be identified in the SER and its supplements. The LPM should vigorously pursue their resolution during the post-CP period.

Soon after the issuance of the CP, the LPM should arrange a meeting with the applicant for the purpose of determining the detailed status of the outstanding issues, including the schedule for their resolution. It should be noted that only the items that must be resolved before the OL review stage need be discussed during this phase. The applicant should submit the additional information that is developed in the form of supplements to the preliminary safety analysis report (PSAR), continuing the sequence of supplements initiated during the CP review. The review and evaluation of this additional information, meetings with the applicant, and the question-response cycle should proceed in a manner similar to that for the CP review. However, a less-rigorous schedule is usually appropriate, and the Advisory Committee on Reactor Safeguards (ACRS) is normally not involved. The schedule for reviewing each outstanding item should be negotiated between the LPM and the cognizant reviewer and the reviewer's management. A detailed schedule should be established and monitored in a manner similar to that for a CP or OL review.

As the post-CP issues are resolved during the final design and construction phase, the LPM should prepare a letter documenting these resolutions for transmittal to the applicant. Some of these issues may be affected by new staff requirements that are instituted after the CP is issued. The LPM should ensure that the resolutions meet current staff requirements by checking the appropriate sections of the standard review plan and the multiplant action items. The LPM should verify that any new staff positions are applicable to the facility, since implementation of new requirements is sometimes indexed to the date of CP docketing, CP issuance, or OL docketing.

In addition to the post-CP items discussed above, applicants frequently make design changes and other changes to the plant after the CP is issued but before the OL application is submitted for staff review. At the present time, neither the Atomic Energy Act nor the regulations precisely define the legal obligation to which a permit holder is bound by the representations made in its CP application. Although it is desirable to hold the applicant to the commitments made in the PSAR and the hearing record, it must also be recognized that most of these commitments are made to meet approved design criteria, rather than to construct the plant in accordance with a specific design. This is a consequence of the preliminary nature of the design at that point. Therefore, sufficient flexibility must exist to accommodate needed and desirable changes that evolve during construction. Mechanisms used by permit holders to inform the staff of such changes have varied from formal letters and amendments, to informal drafts and oral communications, to no notification at all until submittal of the final safety analysis report. Staff implementation has been ad hoc, varying from formal safety evaluations, to letters acknowledging the change but noting that the matter would be reviewed at the OL stage, to oral acknowledgement, to no acknowledgement with review deferred to the OL stage. At the present time, no firm guidance has been developed and each LPM must exercise judgment in recommending the best course of action in each case. In general, changes that do not involve a change in the principal architectural and engineering criteria for the plant design need not be reviewed until the OL

application is submitted. The LPM should discourage the applicant from submitting information about minor changes.

The CP contains an administrative limitation regarding the earliest and latest completion dates for the nuclear facility. A permit holder must apply for an extension of the CP expiration date if the construction of the facility is not completed by the latest date specified in the CP. An additional review of the impact of this delay on safety or environmental matters must be performed, and a CP amendment reflecting the new completion date must be issued before the current expiration date (see microfiche 35516 176 for an example).

2.4 Operating License Review

The review and evaluation process that the staff follows for issuing an OL is similar in many respects to the process for issuing a CP. The major difference is that the OL review is concentrated on the details of the plant design, whereas the CP review covers design criteria and the plant design concept. Also, the OL review addresses plant operation, including such items as technical specifications, emergency planning, plant security and safeguards, and preoperational and startup test programs. Further differences involve the extent to which design changes can be made and the extent to which any significant items can be allowed to remain outstanding. The subsections that follow describe the responsibilities of the LPM in managing the OL review.

2.4.1 Acceptance Review

The first step in the review of an OL application once it has been tendered is the performance of an acceptance review, under the direction of the LPM, to determine completeness of the application. 10 CFR 2 states that generally this determination will be made within a period of 30 days.

The acceptance review is conducted to determine whether the application complies with Commission requirements for the scope of such applications. This includes addressing the areas defined in the most recent revision of Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants"; the standard review plan (NUREG-0800), and the environmental standard review plans (NUREG-0555). The acceptability of the tendered application hinges primarily on whether or not all pertinent matters have been addressed and not on whether the applicant's approach to resolving these matters is acceptable. Making determinations about the latter is the primary objective of the review and evaluation process that follows acceptance of the application. The acceptance review is performed on the technical documentation included in the application, namely, the final safety analysis report (FSAR) and the environmental report (ER).

The review of the FSAR and ER for acceptability is typically performed by the appropriate review branches in NRR. The LPM should prepare an internal memorandum to all participants in the FSAR and ER review for their assigned areas of responsibility.

As with other aspects of the review, the basic review for acceptability of the FSAR may be performed by the NRC staff or by outside contractors under the

guidance of the staff. As used herein, the term "reviewer" should be interpreted to encompass the use, where appropriate, of outside consultants and contractors.

When the reviews are completed, the results are sent to the LPM in the form of reports listing the deficiencies found. The LPM, in consultation with NRR management, decides if the deficiencies justify rejecting the application. If the application is accepted, it is docketed, the applicant is notified of the docketing, and the applicant is sent a list of the deficiencies along with a date by which the deficiencies should be corrected. If the application is rejected, a similar letter is sent, informing the applicant of the specific deficiencies that must be resolved before docketing.

The LPM, in consultation with the licensing assistant, should make sure that the applicant is aware that the appropriate number of copies for various submittals during the course of the review is given in 10 CFR 50.30. The acceptance letter will provide, as an enclosure, a distribution list that the applicant must use in distributing the safety analysis report (SAR), ER, and general information portions of the application. Copies of all correspondence sent to an applicant (except security, safeguards, and proprietary information) are also sent to everyone on the service list, to the NRC PDR, and to the LPDR. The licensing assistant is responsible for maintaining current service lists for each facility.

2.4.2 Plan for Review

The basic plan for reviewing an application consists of a list of the assigned reviewers for each of the various review branches, the agreed-upon schedule, any significant anomalies of the review requiring special emphasis, or additional documentation that the applicant has promised for later submittal. Except for these anomalies, the review should proceed as described in the standard review plan and the environmental standard review plans.

As mentioned in Section 2.4.1 above, parts of the review may be contracted out if staff resources are inadequate to meet the schedule. In such cases, the LPM must coordinate with the responsible review branch and with the designated NRR contract manager to ensure that the contractor complies with schedules.

The review of the application for compliance with plant security and safeguards requirements is conducted by the Office of Nuclear Material Safety and Safeguards (NMSS). The result of the NMSS review is sent to the Safeguards Branch, where it undergoes a review of the safety implications of the security system. Much of this review is withheld from public disclosure pursuant to 10 CFR 73.21. The review of the application for compliance with emergency preparedness requirements is conducted in the Emergency Preparedness Branch, with input from the Federal Emergency Management Agency (FEMA). Results of the review, including FEMA input, are sent directly to the LPM.

2.4.3 Development of the Licensing Review Schedule

As the acceptance review nears completion, the LPM must begin to develop the overall schedule for the detailed safety and environmental review of the application. If the acceptance review shows that the SAR and ER are reasonably

complete, the application may then be docketed immediately after the 30-day acceptance review has been completed, and the detailed review process may begin. Should the SAR or ER be judged to be incomplete, a few weeks are generally needed for the applicant to prepare the missing information and resubmit the application. In either event, the LPM has to develop the schedule for the project review as soon as possible after the acceptance review has been completed. In the former case, the schedule must be developed expeditiously; in the latter case, the scheduling effort may proceed in parallel with the applicant's rework. The goal is to have a management-approved schedule within 10 working days after docketing. The development of an approved schedule is a prerequisite to the initiation of review activity by the various review branches. Thus, the lack of an approved schedule can delay the review process.

During the acceptance review, the LPM should develop a schedule network. The network shows the review process, including schedule milestones that will be undertaken by the technical review branches, and other key areas such as reactor safeguards, emergency planning, indemnity, and antitrust. The detailed network can assist the LPM in monitoring project status and in determining impending schedule changes.

Early development of the initial schedule is one key to a well-organized and timely review. It is important that the LPM vigorously pursue development of the schedule, because the LPM is the focal point of information and of decision made in this effort.

The LPM must inform the applicant of the approved schedule by letter and should discuss the schedule with the applicant to ensure the applicant fully understands the proposed schedule. The LPM should make it clear that delay by the applicant in providing acceptable responses to staff requests for additional information is very likely to result in a delay in the review schedule.

After the schedule has been established and the review effort has been initiated, it is the continuing responsibility of the LPM to investigate ways to maintain established target dates, especially if the schedule appears likely to slip. Specifically, the LPM must advise NRR management of any schedule dates that appear to be slipping. Typical slippages are due to such things as late response by the applicant or reviewers, delayed hearing initiation dates, or delayed hearing decision dates. The LPM should orally emphasize to the reviewers and to the applicant the desirability of completing scheduled events on time and taking necessary steps to ensure this.

2.4.4 Initial Management Meeting

NRC managers meet with the applicant upon completion of the acceptance review of a tendered OL application. If possible, the meeting should be held before docketing. The purpose of the initial meeting with the applicant is to introduce to each other key NRC and management personnel involved in the review process, to discuss the review schedule and compare the major review milestones with the applicant's construction schedule, and to discuss the safety and environmental issues that the LPM believes will receive major emphasis during the review process. Other procedural matters should also be resolved, such as the method for incorporating additional information in the FSAR and arrangements

for telephone contact between applicant and staff. Some guidelines for the meeting are given below:

- (1) Because of the difficulty in arranging this meeting consistent with the schedules of NRR division directors, the application is usually docketed before the meeting takes place.
- (2) The meeting should be limited to 1 hour. If more detailed discussions are needed, the LPM can meet with a smaller group following the management meeting. This will help ensure that all NRR division directors can attend the entire meeting and thereby facilitate discussion of all aspects of the review schedule.
- (3) Before the meeting, the LPM should solicit suggestions from NRR management regarding major issues to be discussed with the applicant and should inform the applicant of these issues.
- (4) The LPM should prepare a draft review schedule for presentation at the meeting, including at least the major milestones in the review process. The final schedule is usually transmitted to the applicant after the initial management meeting takes place.

2.4.5 Caseload Forecast Panel

This section addresses an entity that does not currently exist due to the small number of OL reviews. The subject panel is convened if the need arises again.

For purposes of scheduling, it is important to have an accurate estimate of the date by which the applicant will complete construction and will be ready to load fuel. The applicant normally estimates the fuel load date, but NRC periodically makes an independent estimate by means of the Caseload Forecast Panel (CFP). The CFP usually meets at the plant site and provides a fuel load date estimate soon after the OL application is docketed. This process is repeated annually, thereafter, until fuel loading. The CFP for each project is set up by the LPM and usually consists of the LPM, a representative of the Office of Administration and Resources Management, and the resident inspector for the project, as a minimum. The LPM is a key member of the panel and should take an active role in the visit to the site by the CFP and in its decisions.

It is NRC's practice to schedule OL reviews on the basis of the applicant's estimated fuel load date. The CFP estimate is of use to the staff because it serves two principal functions:

- (1) It provides NRC management with an independent judgment on the reasonableness of the applicant's schedule.
- (2) It alerts NRC management to, and focuses management's attention on, those projects for which schedule revision might be appropriate.

The LPM must be able to explain the basis for the CFP date to NRC management. This implies that the LPM must be able to support the view that concluding the NRC licensing process by the CFP date rather than by the applicant's date would

have no effect on the plant's startup schedule (assuming standard hearing schedules if there is intervention).

2.4.6 Technical Review

During the technical review of the FSAR and ER, the LPM integrates and coordinates the efforts of the various reviewers. The LPM does this by initiating and maintaining a close liaison among the technical reviewers in each review area. Liaison actions should include open discussion of current and potential safety and environmental problems and ideas for resolving them on the approved schedule for the review. The LPM comes in contact with all of the review branches and should be aware of the interactions between branches, technical areas of potential collaboration between branches, and technical situations in which the review effort of one branch may have a direct effect on the review effort of another, particularly if the applicant's technical treatment of an issue is novel. The integration and coordination efforts by the LPM should all be directed primarily toward obtaining a high-quality review that is consistent with current staff positions, and that meets the established review schedule.

The FSAR and the ER are reviewed technically by the functional review branches in the NRR divisions and in NMSS (for safeguards), as well as by the LPM. Review of the various chapters and sections in the FSAR is defined by NRR Office Letter No. 800. Details of the responsibility of each branch in carrying out its review functions, including criteria for acceptability, are contained in the standard review plan (SRP) and the environmental standard review plans (ESRPs). The SRP also defines the interactions between branches to ensure that a complete review is performed. Although the SRP and ESRPs are effective management tools, the LPM also should ensure, through personal review efforts and discussions with the reviewers, that a complete and high-quality review is performed.

The majority of questions, problems, and potential delays that arise during the review can usually be settled by discussion among the individual technical reviewers and the LPM. In those instances in which resolution cannot be obtained at the reviewer-LPM level, the issue must be elevated through levels of management until it can be resolved.

As indicated above, portions of the FSAR and ER review are assigned to the LPM. For the safety review, this consists of several general discussion areas including Section 1 of the SAR, "Introduction and General Description of the Plant"; a general evaluation of conformance of the plant design to the NRC general design criteria (10 CFR 50, Appendix A); and the general description and evaluation of the engineered safety features. For the environmental review, the LPM is assigned several general and summary sections. The LPM must also take the lead in assessing the applicant's performance during the course of the review (see Section 5.19 of this handbook, "Systematic Assessment of Licensee Performance"), and in advising managers of potential concerns as they arise.

The preliminary review and evaluation effort by the technical branches may result in requests for additional information from the applicant. The final results of the technical review are sent to the LPM in the form of input to the SER and the draft environmental statement (DES). Although the LPM does not actually perform the detailed review, the LPM must be thoroughly familiar with

the results of the technical reviews and should be in substantial concurrence with them at the time of their publication. The LPM should be sufficiently knowledgeable about the subject matter to be able to assess the general merits of the functional review in terms of (1) previous staff positions, (2) handling of previous similar projects, and (3) conformance with the SRP and ESRPs. The LPM also must be able to ensure that adequate technical bases for the review conclusions exist and are documented.

As the technical review of the application progresses, the LPM and each reviewer should maintain a current listing of the documents (other than documents referenced in the FSAR and textbooks) relied upon during the review and evaluation process. When the application has been reviewed, the LPM should use this listing to prepare a bibliography that is included with the SER when it is issued. Special attention should be paid to references to national codes and standards. The LPM should ensure that all the material used by the staff to reach its review findings is on the docket and in the PDRs (except for material withheld as proprietary or safeguards information).

The LPM should determine, early in the review process, whether or not the staff's independent design verification program (IDVP) will be required to independently verify that key aspects of the plant have been designed properly. At present, staff policy requires the applicant to have such a review conducted by an independent contractor, unless the applicant can provide an acceptable basis for not conducting the IDVP. Review results of the IDVP, or alternative, will be documented in Chapter 17 of the SER or one of its supplements.

2.4.7 Technical Meetings With the Applicant

See NRR Office Letter No. 903 for guidance.

2.4.8 Meetings With Other Groups

See NRR Office Letter No. 903 for guidance.

2.4.9 Applicant Appeals Meetings

See NRR Office Letter No. 903 for guidance.

2.4.10 Preparation of a Request for Additional Information

During the course of the staff's review of an application, it is usually necessary to request additional information about a number of issues. Reviewers formulate questions to elicit additional information from the applicant. It may not always be necessary for the LPM to meet with applicant before transmitting the request for additional information (RAI), particularly if the RAI is clear and not subject to misunderstanding. The questions are generated by the reviewer, reviewed by the reviewer's management, and sent to the LPM by memorandum for use in issuing a letter requesting additional information from the applicant. Each review branch numbers its questions in accordance with a specific numbering system designed to help identify the responses and to minimize the need for retyping question lists in the project directorates (see NRR Office Letter No. 802 for guidance).

The number of rounds of questions and answers between staff and applicant should be minimized. A single, comprehensive set of questions should be prepared and formally issued to the applicant after docketing. The questions will be designed to obtain all the clarification and additional information necessary to prepare complete SER or environmental statement (ES) material in every review area. This approach should be applied to all review areas to the maximum extent possible.

The responsibility of the LPM in preparing this request and letter is to review the questions to determine their acceptability (technical adequacy, clarity, and scope) for transmittal to the applicant; to group the questions by subject matter, maintaining consistency with the content of chapters in the FSAR and ER-OL; and, finally, to compose the accompanying letter including appropriate instructions to the applicant. The key task in this sequence of events is the review of the questions for acceptability. Considering the LPM's knowledge of the application, the LPM should be in a position to understand and critically review each question posed by the reviewers. An adequate basis must exist for each staff position, and the LPM should understand the underlying rationale for the request. If the review branch chooses, draft SER positions may be sent to the LPM for transmittal to the applicant, either with questions or in lieu of them.

The RAI also serves as the public record of the staff's safety concerns about the application at that stage of the review and evaluation process. The request, if properly prepared, can materially assist in obtaining a quality review and in expediting the review process. For these reasons, the LPM must take special care in producing the RAI. In reviewing the questions, the LPM must consider the following:

- (1) The questions should be directed toward obtaining a clear understanding of the design and related safety and environmental features.
- (2) The thrust of the question should be clear and unambiguous. The applicant cannot be expected to provide information that the reviewer thought was requested, but really was not.
- (3) If the question is new and expands the scope of review defined in the SRP or ESRP, managers may need to decide whether to delete, modify, or ask the question. The LPM should elevate concerns to the appropriate level of manager if agreement cannot be reached with the reviewer.
- (4) The question should be pertinent and important to safety or environmental concerns. Questions of a trivial nature or those requesting information that is interesting to the reviewer but not related to safety or environmental concerns should not be asked.
- (5) The potential response to the question should be visualized as well as the ensuing step by the staff. If the response leads nowhere, the question probably should not be asked.
- (6) Redundant questions should be deleted. Sometimes different branches ask similar questions.

- (7) Consistency in the level of review performed by the various branches, as expressed by the level of detail of the questions, needs to be checked and maintained.
- (8) Where appropriate, the question should include or reference the staff position on the particular issue, such as a regulatory guide, a general design criterion, or an SRP section.
- (9) If necessary, the LPM may add or significantly modify questions in the RAI. However, the agreement of the responsible technical reviewer should be sought. If resolution cannot be obtained, elevation to higher levels of management may be necessary.

Once the RAI has been transmitted to the applicant, it becomes the LPM's responsibility to facilitate the timely submittal of applicant responses. As soon as possible, the LPM should verify that the applicant understands the questions and should try to become aware of impending delays in the applicant's response. If it is determined that the applicant cannot meet the schedule date specified in the transmittal letter, the LPM must obtain a new date from the applicant, evaluate the resulting impact of the delay on the project review schedule, and inform the applicant of the revised schedule. This is an undesirable situation that should be avoided whenever possible. The LPM should emphasize to the applicant the importance of submitting timely, complete, and technically adequate responses to avoid delays. Typically, an applicant delay will result in the project losing its place in line to be reviewed, thus delaying the review schedule to a greater extent than the applicant's delay time.

2.4.11 Review of Applicant Responses

Responses to the RAI are submitted in the form of amendments to the OL application that are distributed by the Document Control Branch to the same people and groups who received copies of the application. Primary responsibility for review of each response rests with the reviewer who identified the need for the information. Consistent with the LPM's overall responsibility, responses should also be reviewed by the LPM. It is important that all applicant responses be evaluated not only for technical adequacy, but also for clarity and potential ambiguities. If full cooperation and understanding have been achieved among all parties during the previous processes, no further questions should be necessary.

The LPM must ensure that the staff reviews applicant responses at an acceptable rate. This can only be achieved by frequent contact with the reviewers to determine significant areas of technical difficulty. These areas can be identified to the applicant by telephone or through meetings, followed by appropriate documentation. In this way, the LPM can effect an expeditious staff review.

2.4.12 Preparation of the Safety Evaluation Report

When the applicant's response to the RAI has been submitted, the preparation of the safety evaluation report (SER) can proceed. The SER is intended to be a summary of the review and evaluation of the application by the staff and its consultants as to the anticipated effect of the facility on the public health

and safety. It is provided to the public and the ACRS and is used as the foundation for the other evidence presented at the public hearing on safety. As such, it must be attested to by the LPM as a factual and complete summary of the staff's work. The technical content of the SER must be acceptable to the LPM and to the technical reviewers who become the staff's main witnesses at the hearing. The SER (and its supplements, see Section 2.4.14 below) is, therefore, the principal document in the regulatory licensing process, and it must be prepared with the utmost care and attention to detail.

2.4.12.1 Content

The format of the SER, like that of the FSAR, should generally follow the most recent revision of Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," and the standard review plan (NUREG-0800). However, additional chapters are included in the SER. These additional chapters discuss subjects pertinent to the staff review that are not discussed in the FSAR. The format for all SERs should be consistent, at least to the level of detail of sections below the chapter headings. The LPM should seek the help of a technical editor in the Policy and Publications Management Branch (see Section 6.2.2 of this handbook) in preparing the SER and its supplements.

Input for SER chapters and sections should be sent by memorandum to the LPM, or should be prepared by the LPM, for incorporation into the SER. It is the responsibility of the LPM to critically review each submittal, to take the proper steps to arrive at an acceptable written presentation from each source, and to originate those portions of the SER assigned to him. If a review is judged to be unacceptable, the LPM should return it to the responsible reviewer for reworking. The LPM may make changes that do not affect the technical rationale or conclusions. However, in either case, appropriate dialogue must take place between the LPM and the reviewer to ensure that a mutually acceptable report is finally produced. If agreement cannot be obtained, the problem must be elevated to a sufficiently high level of management so that the evaluation can be used.

If reviewers do not present their work in a timely manner and maintenance of the schedule is threatened, the LPM should contact the reviewer and, if need be, the problem should be elevated through levels of management until the problem is resolved.

Staff personnel who provide input for the SERs should observe the following guidelines. The LPM should verify that all reviewers have a copy of the guidelines before they start to write any SER material.

- (1) SER input should consist basically of a brief descriptive statement of the subject under discussion; the applicant's criteria and an evaluation of the applicant's data, analyses, and conclusions; the staff's criteria and basis for its independent evaluation and conclusions; and the staff's conclusions. It should describe the extent of the staff review including analyses performed, comparisons made, and other considerations that were part of the review. The extent of conformance to the regulations, regulatory guides, general design criteria, standard review plans, and branch technical positions should be indicated.

- (2) Those aspects of the design that were not acceptable and that were changed as a result of the staff review should be identified to provide a historical record of independent actions taken by the staff.
- (3) The staff's position on an issue must be clearly stated and must be technically defensible in all its aspects.
- (4) The SER should reiterate information supplied by the applicant only to the extent that it is absolutely essential to the discussion. There is no need to repeat information already documented in the application, such as system descriptions or description of the noncontroversial details of calculations.
- (5) The SER should contain a minimum of open (or outstanding) issues. Open issues are safety concerns for which no agreement has been reached between the staff and applicant as to a solution, and for which no staff-imposed solution is currently feasible. Examples of this would include incomplete analyses by the applicant to demonstrate compliance with the regulations, the SRP, or other staff criteria. If there are more than 20 open items in the SER, a supplement to the SER will be required to reduce the number before the application is reviewed by the Advisory Committee on Reactor Safeguards (ACRS). Open items are to be distinguished from confirmatory items, which are items that have been resolved to the staff's satisfaction but are awaiting confirmation of their resolution. To qualify as a confirmatory issue, the applicant must have committed in writing to provide the confirmatory information for docketing on a schedule acceptable to the staff.
- (6) If the acceptability of a system, component, or structure is based on its acceptance in a prior application, an adequate basis must be established to demonstrate the similarity of the item to its counterpart in the accepted plant.
- (7) Careful attention must be given to the status of documentation when referencing information (other than that independently generated or confirmed by the staff or its consultants) in support of conclusions stated in the SER. Section 182 of the Atomic Energy Act, as amended, requires that all applications for, and statements made in connection with, licenses under Section 103 or 104 of the act be signed by the applicant and be made under oath or affirmation. Therefore, all information (including that in topical or other reports supplied by vendor or architect-engineer organizations) used by the staff in arriving at its conclusions must be placed (or incorporated by reference) in the record of the application by means of a statement signed by the applicant and made under oath or affirmation. This should be made clear to the applicant at the start of the staff review.
- (8) Each chapter of the SER should have a "Conclusion" section. If the chapter deals with one major subject and is prepared by one branch, a single "Conclusion" section at the end of the chapter should suffice. For those chapters that cover several diverse subjects or are prepared by more than one branch or section, it may be more appropriate to provide conclusions at the end of each section or subject area.

- (9) At the OL stage of review, the SER must address the resolution of the outstanding safety considerations identified by the staff and the ACRS at the CP stage of review. The SER should also include a list of the items that will be incorporated into the OL as license conditions, and a cross-reference should be provided to the SER section covering each item.

The SER is issued to the public, to the ACRS, and to the parties to the Atomic Safety and Licensing Board hearing as a summary of the staff's conclusions regarding the application. As a result of years of experience in preparing documents of this type for such a diverse audience, the staff learned that the optimum approach is to direct the report toward the knowledgeable segment of the public. The LPM must ensure, therefore, that the SER is neither too technical, as a report directed solely to the ACRS might be, nor too elementary, as a report directed solely to the general public might be. An appropriate balance must be achieved. Recently issued SERs should be followed for guidance in achieving this balance.

Documentation of staff review should contain the staff findings and a detailed discussion of the bases for the findings. The SER should also include a discussion of the extent to which the SRP acceptance criteria are met, or the reasons for acceptance or rejection when an acceptance criterion is not met. It should be noted that the "standard" for acceptance or rejection is whether or not the regulation or portion thereof that underlies the SRP acceptance criterion is satisfied.

The regulations (10 CFR 50.34) require applicants to document differences from the SRP acceptance criteria. The applicant's documentation should facilitate the preparation of the SER.

In addition to a description of the review findings and their bases, the documentation of staff review shall include a discussion of the scope of the review; that is, whether each area of review and review procedure in the SRP was followed and why differences from the scope of staff review identified in the SRP are acceptable. The "Areas of Review" and "Review Procedure" sections of the SRP contain statements that characterize safety considerations, identify who is to perform the review, and provide a perspective for the review. The staff review is of necessity an audit review; therefore, absolute conformance by the staff to the review outlined by the SRP is neither expected nor desired. The staff is expected, however, to describe (document) the scope of the review that was actually performed. This should be done in terms of what is identified in the SRP. Two examples follow, which present in an abbreviated fashion two ways of describing the review. Regardless of the way selected to document staff review, the description must enable a knowledgeable colleague to determine what was or was not considered and why. The examples are:

- (1) All areas of review and review procedures identified in SRP Section X.XX were followed. In addition, the staff reviewed the plant for conformance to Position 1.XX of RG 1.YY and the guidance presented in NUREG-0000. The staff found the plant acceptable in these areas. Details of the review follow.
- (2) The review identified by SRP Section X.Y.Z was limited to (describe item). No other areas or procedures of that section were followed because the

plant is known to be a duplicate of a plant (name) reviewed previously against these areas and found acceptable.

An appendix to the SER should include the names of the LPM, all reviewers (including their branch or review subject), the licensing assistant, the technical editor, and all contractors who worked on the SER. Copies of contractor reports prepared for the particular plant should, when appropriate, be appended to the SER.

2.4.12.2 Treatment of Hearing Contentions

If there are issues that will be items of contention in the hearing, management should be made aware of them. SERs must contain appropriate discussions to deal with all contentions on a particular case. This means that the LPM must provide guidance to the reviewers regarding the existence of contentions and how best to deal with them in the SER. For some aspects, more than one reviewer will be required to provide inputs that will subsequently be integrated by the LPM. The contentions need not be addressed explicitly, but the SER text should contain sufficient coverage to deal with all technical aspects of the contentions.

When the SER is circulated to the reviewers for approval, the cover memorandum should identify all admitted and proposed contentions in the case. Proposed contentions that have been denied by the hearing board need not be included. The memorandum should identify where in the SER the staff addresses the issue raised by each contention and the staff's judgment on whether the SER writeup would preclude the need for subsequent written staff testimony for each contention.

2.4.12.3 Treatment of Issues Related to the Three Mile Island Action Plan

A number of additional requirements were imposed on nuclear power plants as a result of the Three Mile Island (TMI) accident. These requirements were described in "Clarification of the TMI Action Plan Requirements," NUREG-0737 and its supplement.

The TMI-related issues have been incorporated into the SRP (NUREG-0800) as a regular part of the licensing review process; a separate TMI section in the SER is not needed. The present format requires incorporation of the discussion of TMI issues into appropriate sections of the SER. This format includes a summary statement of each TMI requirement instead of the verbatim repetition of the NUREG-0737 requirement and the clarification statements. A table should be placed in Section 1 of the SER that identifies where in the SER each TMI issue in NUREG-0737 is discussed.

2.4.12.4 Early Draft

An SER draft based on the OL application and the responses to a single set of questions should be prepared upon receipt of the applicant's responses. Where information is lacking or inadequate, the draft will identify the area as an open issue and briefly state the staff position and the basis for the position. Preparation of the draft should be the reviewers' highest priority assignment, commanding as much of their participation as necessary until the draft is completed and submitted to the LPM. During the preparation period of the draft SER, meetings and telephone conferences should be held to resolve as many open

issues as possible within the scheduled period. This approach requires a careful balancing of priorities and workforce scheduling.

2.4.12.5 Final Version

The SER draft discussed above should be reviewed by NRR management according to Section 2.4.12.6 below. Following approval, copies should be sent to the applicant, to people and groups on the service list (including intervenor groups), to the ACRS, and to PDRs; the remaining open issues and staff positions should be identified clearly. If necessary, the applicant should make available appropriate members of its staff in NRC offices, until the SER exists in final form. This group will make an intensive effort to resolve outstanding issues and will work in NRC offices for as many days as necessary to achieve this. This resolution can be facilitated by working meetings with the staff, to be followed by submittal of acceptable documentation and/or commitments by the applicant to satisfy staff requirements. It is especially important to identify as early as possible any additional analysis or other work that has to be done to resolve outstanding issues. Even if total resolution is not possible, this approach will (1) eliminate applicant misunderstanding of staff requirements, (2) provide a timely forum for applicant appeal, (3) identify staff positions that are not negotiable, and (4) emphasize to the applicant that all staff requirements must be satisfied before a license will be issued. NRC staff reviewers will give high priority to being available as needed during this period. In accordance with staff practice for all meetings with the applicant, interested members of the public may attend these working meetings as observers, but not as participants. Members of the public should be advised of this and should be offered the opportunity to question the staff at the conclusion of the meeting. Summaries of these meetings should be issued and copies of the summaries should be sent to the applicant, to people and groups on the service list (including intervenor groups), and to the ACRS.

2.4.12.6 Review and Publication

When a draft of the SER has been assembled that the LPM considers to be acceptable, it is subjected to review and comment by the project director, by the Office of the General Counsel, and by the assistant directors of the participating review groups. Final approval is obtained from the LPM's division director. The SER is printed and distributed to people and groups on the service list, to the ACRS, to people representing the affected States, and to the public through both the main public document room (PDR) and the local PDR. To aid NRC management in its review of the SER, the LPM should prepare a memorandum that lists, categorizes, and summarizes the status of outstanding issues. The memorandum should be sent to the division directors and assistant directors of contributing divisions and offices. This information is also presented to the ACRS in the letter that transmits the SER to the ACRS. The letter of transmittal to the ACRS is prepared by the LPM. (The LPM should consult with the assigned NRR coordinator for ACRS activities regarding distribution of the SER.)

2.4.12.7 Review by the Office of the General Counsel

The Office of the General Counsel (OGC) must review and concur in the SER. The draft SER should be sent to OGC concurrent with the NRR management review.

Portions of the SER that have the potential to cause problems should be discussed with the assigned attorney before the entire draft is submitted.

2.4.13 Advisory Committee on Reactor Safeguards

When the SER has been issued, a meeting of the full Advisory Committee on Reactor Safeguards (ACRS) is arranged. The ACRS chairman (through the designated ACRS staff member) is kept informed by the LPM of the scheduled availability of the SER beginning as early as 3 months before the meeting date. The ACRS staff will inform the LPM of the specific time, date, and agenda items to be discussed. It is the LPM's responsibility to relay this information to the applicant and to NRR reviewers.

In general, the SER should be issued only if there are fewer than 20 outstanding (open) issues and if the applicant has agreed to provide the necessary information on these issues on a schedule acceptable to the LPM. If there are outstanding safety issues at the time of SER publication that can be resolved or changed to confirmatory status before the ACRS meeting, the LPM should firmly insist, with appropriate assistance from NRR management as necessary, that the applicant submit information to resolve these issues for the staff's review and evaluation before presenting it to the ACRS. The LPM should provide the ACRS subcommittee and full committee chairmen (through the ACRS staff) with an up-to-date status of outstanding items a day or two before the meeting. It is NRC policy for the staff to evaluate the proposed resolution of a safety issue before the second independent review by the ACRS. Reversal of this two-step sequence can compromise the independence of the reviews. If the applicant fails to provide the required information on a timely basis, the schedule for ACRS review should be delayed.

The assigned LPM, the project director, and the assistant director should attend any ACRS full committee meeting on a specific license application. They should be present for the entire meeting. The assistant director also should be present for the entire meeting on any matter that relates in a substantive manner to current or future applications. Reviewers from other divisions or offices that have been assigned to review areas anticipated to be discussed at ACRS meetings should attend. In addition, each of these reviewers' section leaders, branch chiefs, or assistant directors should attend. These reviewers should be present when the meeting commences, unless the LPM and the project director have approved other arrangements.

The ACRS full committee meeting is similar to a subcommittee meeting. At the meeting, the LPM, principal spokesman for the NRC staff, receives assistance as necessary on technical details from the staff specialists, as well as from the branch chiefs and assistant directors on broader, more-generic issues. Because the ACRS members will have been in possession of the SER for at least a few weeks before the meeting and should be familiar with its contents, the LPM need only present an oral summary of changes or additions to the SER that have occurred since its issuance and be prepared to respond (with assistance from attending staff members as necessary) to questions from committee members. As is the case for subcommittee meetings, members of the public may submit written statements before the ACRS meeting begins.

At the conclusion of the meeting, the ACRS chairman normally advises the staff and the applicant either that sufficient information and adequate solutions to safety concerns have been presented to permit a final letter to the Commission to be written or that additional meetings will be necessary. The chairman will generally indicate, for the former case, the nature of the safety issues to be addressed in the letter, and, for the latter case, the areas of safety concern judged to require additional information. Occasionally, the Committee will write an interim report, and depending on the resolution of certain matters, will follow that report with a letter. After the meeting, the ACRS staff will publish minutes of the meeting.

NRR Office Letter No. 701 offers detailed guidance regarding staff participation in ACRS reviews.

2.4.14 Preparation of Supplements to the Safety Evaluation Report

After the ACRS letter has been received, the LPM prepares one or more supplements to the SER (SSER). The SSER is intended to complete the staff's review and evaluation of the OL application, to present the ACRS letter (as an appendix to the SSER), and to offer the staff's planned technical approach and schedule for resolving any outstanding safety issues. The SSER also contains the staff's conclusions regarding resolution of open safety issues proposed by the applicant since the SER was published, and acknowledges receipt of confirmatory information.

Typically, several SSERs are issued. In practice, resolution of open issues is continued all the way to the time of issuance of a low-power or full-power license; therefore, the LPM should plan to issue an SSER coincidentally with issuance of a license. These documents must be prepared with the same care and attention given the SER because they possess the same stature as the SER relative to the subjects they evaluate. The supplements to the SER are reviewed and distributed in the same manner as the SER.

2.4.15 Preparation of the Draft Environmental Statement

The requirement for the preparation of an environmental statement (ES) is derived from Section 102 of the National Environmental Policy Act of 1969 (NEPA). The NRC regulations for implementing NEPA are given in 10 CFR 51. The requirements for the applicant's environmental report and the NRC's environmental statement, as well as other matters related to the licensing process, are in 10 CFR 51. NRR Office Letter No. 906 offers review responsibilities and other details.

At the CP stage, the staff prepares a draft environmental statement (DES) related to the construction and operation of the proposed nuclear power plant. When the DES is issued, Federal agencies and State and local officials and agencies are requested to comment on it and private organizations and individuals are also invited to comment. After a defined period from the time it is issued, the DES is revised as appropriate, on the basis of the comments received. This revised version of the DES, along with the comments received and the answers to those comments, is published as the final environmental statement (FES) and accompanies the CP.

The purpose of the independent assessment provided in the ES is to give agencies and other decisionmakers, as well as members of the public, an understanding of the unavoidable adverse environmental impacts of the proposed action and the balancing of the benefits versus the environmental costs of the proposed action. In particular, NRC should use the process of generating an ES to explore alternative actions that will avoid or minimize environmental impacts and to evaluate both the long- and short-range implications of the proposed actions on people, on their physical and social surroundings, and on the natural environment.

The OL review and the resulting final environmental statement related to the operating license (FES-OL) are essentially extensions of the CP review and the final environmental statement at the CP stage (FES-CP). The FES-OL differs from the construction permit environmental statement in that changes in the environmental impacts relating to plant operation since the issuance of the FES-CP are emphasized and new information and analyses not previously performed or considered are provided. Currently, valid information presented in the FES-CP is repeated in the FES-OL only to the extent that it is necessary for understanding the proposed plant operation and its relation to and impact on the public health and the environment.

From the LPM's viewpoint, the preparation of the DES proceeds much like the preparation of the SER. When the review and evaluation of the application have progressed to the point where the LPM and the review staff have completed their review and evaluation, their respective sections of the DES are prepared. The DES should follow Appendix A to subpart A, "Format for Presentation of Material in Environmental Impact Statements," in NRC regulation 10 CFR 51.

The LPM is responsible for preparing any sections containing new issues. The review branches provide the remaining sections of the ES. In addition, they are available for consultation on any of the subjects in their area of expertise. Frequently Federal, State, or local agencies comment on the applicant's ER. The LPM should make sure that such comments are noted by the appropriate reviewers and considered when the DES is written.

It is the responsibility of the LPM to ensure that the conclusions of the ES are representative of the reviewing team and reflect NRC policy for the application.

Material for the environmental impact statement should be provided to the LPM. It is the responsibility of the LPM to critically review each submittal from the reviewers, to take the proper steps to arrive at an acceptable contribution from each source, and also to originate those portions of the DES assigned to the LPM.

The DES is issued to the public primarily as a summary of the staff's initial conclusions (these conclusions will be final if no significant comments are received) regarding an application. The DES is not a draft in the sense of being incomplete. It is a draft discussion of the proposed action and the staff's assessment of its potential benefits and environmental costs presented to the public for purposes of requesting clarification or of providing additional information for staff consideration in making its assessment and benefit cost balance. If no comments are received, the DES could be published as an FES.

As a result of experience in preparing such documents for a diverse audience, the staff learned that the optimum approach is to orient the report toward the knowledgeable segment of the public. The LPM must ensure, therefore, that the DES is neither too technical, as a report directed solely to the technical community might be, nor too elementary, as a report directed solely to the general public might be. An appropriate compromise must be achieved.

When all sections of the DES are completed, the LPM assembles the DES in collaboration with a technical editor from the Policy and Publications Management Branch (see Section 6.2.2 of this handbook).

The review by OGC and NRR management and publication of the report are similar to those actions for the SER (see Sections 2.4.12.6 and 2.4.12.7 above).

2.4.16 Comments on the Draft Environmental Statement

When the DES is approved for issuance, it is sent for public noticing to the Environmental Protection Agency (EPA) in accordance with Council on Environmental Quality regulations. It is also sent to appropriate Federal, State, and local officials along with a letter requesting their comments. EPA places an announcement in the Federal Register indicating the availability of the DES and indicating that interested persons may comment on its contents or conclusions. At the same time, copies are distributed to the appropriate NRR branches. The comment period is fixed at 45 days from the date EPA's announcement appears in the Federal Register.

Comments received on the DES are sent to the LPM for processing. The LPM must analyze the comments, responding to some and distributing others to the appropriate review branches for their review and response. Response to the comments may take one or more of several forms: a portion of the DES may be changed, new material may be added to the appropriate section identified in the discussion of comments, or no change may ensue. All comments are considered and the staff responses are identified or located in one section of the FES so that the reader can determine the staff's response to each comment.

At the time the comments on the DES are sent to the appropriate staff reviewers for response, the LPM also sends the comments to the applicant so that the applicant can respond to them. Responses from the applicant, although not obligatory, may be essential sources of information to the NRC staff for evaluating the comments. If such is the case, the applicant should be so informed. Such information may be used in the responses by the staff. The applicant's responses are not published in the FES but are docketed. If the applicant chooses to comment on the DES during the 45-day comment period, the comments will be responded to and will be published in the FES along with all the other comments.

When Federal, State, or any other comments are received late, that is, after the comment period is over and too late for review and inclusion in the FES, the staff will prepare written responses in the same manner as outlined above so they will be available for use at the public hearing. The method of introducing these responses in the hearing will be decided upon by the OGC attorney in consultation with the LPM. The LPM should transmit staff responses to late comments to the commentor.

2.4.17 Preparation of the Final Environmental Statement

The LPM receives the responses from the various reviewers, coordinates them with the other responses, and makes necessary changes to the DES. The LPM reviews the responses and any necessary changes in the "Summary and Conclusions" section or in other parts of the ES to make the final document consistent with the NRC staff's responses to comments. When this has been done, the statement is ready for publication as a final environmental statement (FES).

When the FES is ready for final approval, it is sent to OGC and to NRR divisions for approval, using procedures similar to those for approving a DES. When this approval is received, the FES is issued.

The FES is a summary of the evaluation of the environmental portion of the application relative to the anticipated impact of the proposed facility on the environment. It is provided to the public and is used as the main body of environmental evidence at the public hearing to support the Commission's conclusion that a CP should be granted to the applicant or rejected. It must be attested to by the LPM as a factual and complete summary of the staff's work. The technical content of the FES must be acceptable to the LPM and associated reviewers who become the main witnesses at the hearing. The FES is, therefore, an important document in the licensing process and must be prepared with care and attention.

Comments on the FES are not solicited. When comments are received on the FES, responses are handled in a similar manner to those on the DES. The responses are sent to the appropriate commentor.

Requirements proposed in the FES are summarized into an environmental protection plan, which constitutes Appendix B to the operating license.

2.4.18 Emergency Preparedness

Before a full-power operating license is issued, a finding must be made that on-site and offsite emergency preparedness provides reasonable assurance of adequate protective measures, based in part on a Federal Emergency Management Agency (FEMA) review. To make this finding, the staff of the Emergency Preparedness Branch, assisted by an appraisal team, reviews emergency plans as they are submitted, appraises their implementation at the site, observes and evaluates tests and exercises, and then certifies that both onsite and offsite emergency preparedness is acceptable. In reaching the decision, that branch considers the findings of FEMA in its evaluations of the preparedness of State and local governments.

The LPM for the facility is encouraged but not required to be a member of the appraisal team. As a minimum, the LPM should be sufficiently aware of the team's activities to ensure integration of team results into the schedule and to support the findings of the team. The basic regulations on emergency preparedness are found in Appendix E to 10 CFR 50.

2.4.19 Materials Licensing and Physical Security Review

The operation of a nuclear facility requires certain quantities of special nuclear material, source material, and byproduct material. The applicant applies separately for licenses to receive, possess, and use these materials under the provisions of 10 CFR 70 and 30 before an OL is issued to a facility.

The Division of Fuel Cycle, Medical, Academic and Commercial Use Safety in the Office of Nuclear Material Safety and Safeguards (NMSS) is responsible for processing these license applications and issuing the specific licenses. Before an OL is issued, the applicant must submit information on the technical capabilities, facilities and procedures for handling and storing this material, which is reviewed by the NRR Division of Radiation Protection and Emergency Preparedness in connection with the applicant's overall program for radioactive materials safety. The conclusions of this review are incorporated in the SER, and, if acceptable, broad possession limits are incorporated in the OL.

As part of the application, the OL applicant is required by 10 CFR 73.55 to submit a physical security plan and the associated contingency plan and training plan. The objective of these items and the plant physical security system that the applicant describes is to protect the plant against the design-basis threat of radiological sabotage. The security plan is reviewed by the Safeguards Branch in NRR. Much of the information related to physical security must be physically protected at the NRC and is withheld from public disclosure pursuant to 10 CFR 73.21. Additional information regarding document control and conduct of the review of security information may be obtained from the Safeguards Branch.

2.4.20 Technical Specifications

One of the major tasks in performing the OL review is the development of suitable technical specifications (tech specs). The tech specs become Appendix A of the OL and govern the subsequent operation of the facility relative to the health and safety of the public. They identify and define all the safety-related operating limits and requirements that the licensee must abide by without change unless specific approval (i.e., in the form of a license amendment or discretionary action) is obtained from the NRC. The tech specs must be substantially complete before the plant operating procedures can be written and the plant operators can be trained. The tech specs are developed in much the same way as are the review and evaluation of the SAR and ER. Input information is provided by the licensee, review and evaluation is performed by the respective review personnel, and the overall management and integration responsibility is carried out by the LPM. The schedule objective is to issue a "proof and review" draft of the tech specs no later than 3 months before the scheduled fuel load date.

Development of the tech specs should commence shortly after the SER is issued. Many of the tech spec requirements are delineated in the SER. Since the requirements would be supplemented and amended by SER supplements (SSERs), the tech specs should be developed concurrently with preparation of the SSERs.

The base document for developing the tech specs is the current version of the standard technical specifications for the individual vendor. For multiple-unit sites, the base document may be the tech specs for the first-licensed unit on the site. This policy is clearly stated in NRR Office Letter No. 803 (the Beaver Valley Unit 2 tech specs is an example). Regardless of the base document used, overall management of tech spec development is traditionally handled by a specialist from the Technical Specifications Branch; the PM should maintain continuous communication with the assigned specialist.

2.4.21 Site Readiness Review

Shortly before an OL is issued, a meeting is held at the site to discuss the project. This meeting is attended by the LPM, the project director, the Director of NRR, and two or more other NRR division directors. Regional office participation is encouraged, and the resident inspector should attend. Management-level representatives of the applicant are requested to attend. The LPM should arrange this meeting. The purpose of this meeting is to give NRC managers a chance to discuss with the applicant's managers the plant design and the applicant's management capabilities and organization. At this meeting, the applicant should present an overview of the plant design, unique plant features, special licensing or design problems, organizational structure, and a realistic assessment of the plant's readiness for operation.

2.4.22 Issuance of an Operating License

Before an OL is issued, a finding must be made by the applicant that the nuclear facility has been constructed substantially in accordance with the application and NRC requirements. The regional administrator must concur in that finding. Completion of construction, in addition to the actual building of the facility, includes implementation of the quality assurance program for operations, completion of preoperational testing, preparation of operational procedures, and implementation of the security, emergency, and environmental monitoring plans and programs.

Throughout construction, the LPM must keep continually aware of construction progress and estimated fuel load date. The LPM usually does this through informal discussions with regional office personnel and documented estimates by the applicant. Occasionally, however, the LPM will have need for a specific analysis of an estimated fuel load date. In such cases, the LPM should request such an analysis from the regional office.

Operating licenses may be issued pending the satisfactory completion of certain construction items. The LPM must maintain liaison with regional personnel to make sure all outstanding items of construction are completed before granting any authorization for operation at a higher power level. The LPM is responsible for including any special conditions that must be reflected in the OL, especially conditions stated in the SER and SSERs.

Approximately 4 months before the projected date of construction completion (fuel load date), the LPM and the licensing assistant should prepare the appropriate OL documents using one or more recently issued OLs as template. The package includes the operating license, the tech specs (Appendix A to the OL), the environmental protection plan (Appendix B to the OL), the Federal Register notice, and a transmittal letter to the applicant. The recently issued OL that is used as a model will show the individuals/organizations that must concur on the OL.

It is NRC practice at this time to issue a license that authorizes operation below 5% power. This allows fuel loading, the completion of hot functional testing, and low-power physics testing. Then, if the licensee has demonstrated the capability to operate the facility safely, and all the necessary license conditions have been met, a new OL is issued to allow operation up to full

power. Before the full-power OL is issued, NRC key personnel visit the plant a second time, and the NRC staff meets with the Commission to request its approval for issuing the full-power OL. If a majority of the Commissioners approve, the staff issues the full-power OL.

2.4.23 Operating License Conditions

Generally, by the time the SER and FES are issued, the staff has concluded it will issue the OL. That is, subject to satisfactory resolution of open items, the staff recommends that an OL be granted. This is true primarily because, by this time, the applicant has resolved to the staff's satisfaction most of the significant safety issues that were developed during the review. There may be concerns, however, which, while not ruling out an OL, still have not been acceptably resolved. Thus, an OL may specify that certain conditions pertaining to the protection of public health and safety or the environment must be met. For each such item, a completion date or a plant operating mode is specified. In the former case, the plant may not be operated after the specified date if the condition has not been met. In the latter case, the plant may not be operated beyond the specified mode (e.g., a given power level) if the license condition has not been met.

2.4.24 Need for Commission Briefing by the Office of Investigations

This section is based on a directive from F. Miraglia to all project managers (memorandum dated September 2, 1987):

By memorandum dated July 27, 1987, the EDO [Executive Director for Operations] directed the Director, NRR, and regional administrators to determine whether ongoing OI [Office of Investigations] investigations would have an impact on licensing/restart decisions, and whether a Commission briefing by OI is required. For licensing decisions, NRR was directed to assist the regional administrator in determining, 8 weeks in advance of full-power licensing, which investigations appear to affect that decision. The LPM should interact with the regional office to develop an NRR position regarding OI investigations that could affect the decision. Nine weeks before the scheduled full-power licensing date, the LPM should inform the associate director for projects of those investigations that should be completed before a licensing decision is made.

Two weeks before the Commission's licensing decision is issued, OI must be informed by memorandum of the need for a Commission briefing on investigations. NRR has requested the regions to work with the LPMs in determining whether an OI briefing is necessary for restart decision. For full-power licensing decisions, the LPM should prepare a memorandum 3 weeks before the Commission meeting (Director, NRR, to OI) informing OI of the need for a Commission briefing.

Additional information may be obtained from the NRR allegations coordinator.

2.4.25 Review of FSAR Amendments Before the Operating License Is Issued

Applicants for OLs submit FSAR amendments as late as just days before the OL is to be issued. The LPM should warn the applicant several months in advance that the amendments submitted within a few weeks of OL issuance should not

contain material that NRC has not yet reviewed. In practice, during the last few weeks all new information is submitted by letters; the amendments are used to document information that has already been submitted in those letters.

The FSAR, as amended up to the last amendment before the OL is issued, becomes a historical document and should not be changed. It was the principal document on which the Commission based its issuance of the OL. Plant changes made after the OL has been issued are documented in the updated FSAR, a new document to be issued by the licensee in accordance with 10 CFR 50.71(e). (See Section 3.4.12 of this handbook regarding the updated FSAR.)

NRR Office Letter No. 902 provides details on review of FSAR amendments.

2.5 Public Hearing Process for Operating Licenses

The regulations do not require a public hearing for issuance of an OL, but one may be held at the request of persons whose interests may be affected. Therefore, following the docketing of a tendered application, a notice of opportunity for a hearing is published in the Federal Register.

If potential intervenors present their intention to raise certain issues, the Commission, the chairman of the Atomic Safety and Licensing Board (ASLB) Panel, or an ASLB appointed by the chairman decides on the admissibility of the contentions raised by the potential intervenors and determines whether a hearing should be held. The issues upon which a hearing would be structured must be based on specific grounds cited by the potential intervenors. If a hearing is to be held, a notice is published in the Federal Register.

If a hearing is held at the OL stage, it is the Commission's policy and practice to begin the public hearing in the vicinity of the site of the proposed facility. However, if the parties agree, all hearing sessions can be held in ASLB offices.

The public hearing is conducted by an ASLB established by the Commission. An ASLB comprises three members, one of whom is qualified in the conduct of administrative proceedings, and two of whom have technical or other qualifications deemed necessary by the Commission for the issues to be decided.

The public hearing is intended to provide a forum at which the parties (the applicant, the staff, and the intervenors) can present evidence to support their conclusions as to whether the proposed facility can be constructed and operated without undue risk to the public health and safety and with adequate protection for the environment. As the lead witness for the NRC's case, it is important that the LPM be familiar with the responsibilities assigned to him/her for each of the various aspects of the public hearing process. The following subsections define these responsibilities.

2.5.1 Meetings With Intervenors

In accordance with the Rules of Practice (10 CFR 2), the staff should provide opportunities for intervenors and potential intervenors to meet with staff personnel on an informal basis to permit their concerns to be communicated to the staff for consideration during the review and evaluation process. These meetings also permit the staff to describe its activities to the intervenors

and potential intervenors. The LPM is responsible for initiating the arrangements for and conducting these meetings.

2.5.2 Special Prehearing Conference

10 CFR 2 requires that for contested proceedings a prehearing conference be held within 90 days (or within such other time the ASLB may determine appropriate) following publication of the notice of hearing. The purposes of this special conference are to identify key issues that parties wish to pursue during the proceeding, to consider petitions for leave to intervene in order to allow preliminary or final determination of the parties to the proceeding, to provide for the submittal of status records on discovery, and to establish a schedule for further actions in the proceeding. Participants in the conference normally include the ASLB, attorneys representing the applicant, the staff, intervening parties, and interested citizens. Although the LPM's responsibility during the conference may be limited to obtaining information, his/her attendance is necessary to facilitate understanding of the extent to which technical issues will be discussed in the hearing. Generally, other staff personnel do not attend. No evidence is presented at this conference, and the assigned attorney from OGC represents the staff as counsel.

2.5.3 Discovery Process

Once the controversial matters have been identified in the special prehearing conference, the discovery process may normally proceed, but will be limited to those specific matters. The discovery process may, in some instances, commence at an earlier or later date, depending on circumstances. The discovery process is the seeking by a party to the hearing of information from the other parties directly related to the issues in contention through depositions, interrogatories, and document production. Intervenors are provided with copies of correspondence to the applicant during the course of the proceeding. Although not routinely provided, this service can be continued after the hearing is concluded, if requested by the intervenor.

Discovery on the staff does not include production of the SER or any supplements thereto, but may include all papers (i.e., memoranda, hand calculations, meeting and trip notes, and other items in the LPM's individual working project file) generated during the project review. Consequently, the staff is primarily involved only in responding to interrogatories as a means of discovery. It is the LPM's responsibility to prepare responses to interrogatories or to assist in their preparation by the appropriate review personnel, and to assist OGC in compiling documents subject to discovery. The responsible branch chiefs and the assigned attorney should concur in the responses to interrogatories before the responses are transmitted to the ASLB and parties to the hearing.

2.5.4 Second Prehearing Conference

Within 60 days after discovery has been completed, another prehearing conference is held to further simplify, clarify, and specify the issues under contention; to consider amendments to the pleadings; to obtain stipulations and admissions of facts and of the contents and authenticity of documents to avoid unnecessary

proof; to identify witnesses; to set a hearing schedule; and to address any other matters that may aid in the orderly disposition of the hearing.

As in the earlier conference, no evidence is presented, and the attorney assigned from OGC represents the staff. However, the LPM, in addition to attending the conference to gain information and to foster understanding of the issues, is also responsible for providing technical assistance to the attorney (e.g., in simplifying, clarifying, and specifying the issues under contention). The LPM may also be asked by the ASLB members to provide information in technical areas. Before the prehearing conferences, it may be necessary for the LPM to provide a list of potential witnesses for the hearing, including a brief description of their responsibilities during the review and evaluation of the application.

2.5.5 Evidentiary Hearing

After the SER and its supplements have been issued, the second prehearing conference has been held, and when appropriate ASLB, intervenor, applicant, and staff personnel are determined to be available, the evidentiary hearing is scheduled by the ASLB. If any new technical issues arise after the issuance of the last prehearing SER supplement but before an ASLB decision is rendered, they should be documented in the same manner as during the course of the technical review. The LPM and other staff members have an obligation to notify licensing boards of any new information that may be relevant to the board's decision. This obligation is discussed further in Section 5.20 of this handbook.

The burden of proof for demonstrating that the construction and operation of the proposed nuclear facility satisfy the regulations and other NRC requirements rests with the applicant. The burden of proof for demonstrating the validity of the intervenor's contentions rests with the intervenor. The staff may agree or disagree with the applicant or the intervenor on any issue and may be asked to explain the review and evaluation process that caused it to arrive at its conclusions. Not subject to challenge or discussion in hearings on a specific application, however, is the validity of the regulation applied to a particular issue.

For the hearing, the assigned OGC attorney is responsible for the conduct of the staff's case. In presenting the staff's safety and environmental case, the lead witness is the LPM, who is expected to have sufficiently broad, if not detailed, knowledge of pertinent reactor technology and Commission environmental and safety policy to be able to respond to most questions posed by the ASLB and by attorneys for the other parties. To facilitate this objective, the staff's responses to interrogatories posed by parties to the hearing should be solely sponsored by the LPM or jointly sponsored by the LPM and appropriate review personnel. If the particular LPM's knowledge in an area is especially extensive, he/she should provide more detailed testimony, if necessary. To the extent possible, the LPM should testify, thus minimizing the need for other witnesses. However, the LPM should recognize that other staff witnesses should be used for testifying in specialized fields of technology where it is necessary or prudent to do so. These staff witnesses should generally be personnel who were directly involved in the review and evaluation of the application under consideration.

Guidelines for designation of NRC witnesses are described in detail in NRR Office Letter No. 603.

The LPM, as well as other prospective staff witnesses, must prepare brief descriptions, generally no more than two or three pages long, of their technical background and experience gained during and before their tenure at the NRC. These must demonstrate the qualifications to perform as an LPM or as a specialist and to testify as a witness in the proceeding.

The qualifications document is presented to the ASLB and to all parties to the hearing at the time the LPM is sworn as a witness. As potential witnesses in licensing proceedings before ASLBs, the LPM and other staff members must be prepared to be examined by the members of the presiding ASLB and to be cross-examined by the attorneys for other parties to the proceeding in connection with the SER and their supplemental direct testimony. To prepare for cross-examination, staff witnesses should consult with the staff counsel. In addition, staff witnesses should be aware of the following details with respect to cross-examination:

- (1) A witness should listen carefully to the question and be sure to understand it before responding. The answers must be truthful and responsive.
- (2) A witness should answer all questions to the best of his/her ability. If a witness does not understand the question, he/she should not hesitate to request clarification. A witness is not expected to rephrase or interpret an unclear question.
- (3) An expert witness is expected to testify on the basis of personal knowledge or expert opinion. A witness should not hesitate to inform the cross-examiner of any lack of knowledge or information regarding those areas of cross-examination where such is the case. A witness should not attempt to guess at a question. It is much better to admit to not knowing the answer.
- (4) If the cross-examiner refers to or uses publications or correspondence in the questioning, the witness should request an opportunity to review the material before responding to the question. This will ensure that the answer is accurate.
- (5) A witness should not engage in argument with the cross-examiner.
- (6) The following excerpt from A Manual on Trial Technique in Administrative Proceedings written by E. Barrett Prettyman, a former judge of the U.S. Court of Appeals for the District of Columbia, provides good general guidance for anyone who becomes a witness:

Don't argue. Don't fence. Don't guess. Don't make wisecracks. Don't take sides. Don't get irritated. Think first, then speak. If you do not know the answer, but have an opinion or belief on the subject based on information, say exactly that and let the hearing officer decide whether you shall or shall not give such information as you have. If a "yes" or "no" answer to a question is demanded but you

think that a qualification should be made to any such answer, give the "yes" or "no" and at once request permission to explain your answer. Don't worry about being bulldozed or embarrassed; counsel will protect you. Don't worry about the effect an answer may have. If you know the answer to a question, state it as precisely and succinctly as you can. The best protection against extensive cross-examination is to be brief, absolutely accurate, and entirely calm.

2.5.6 Orders From the Atomic Safety and Licensing Board

As the hearing progresses, the need may become apparent for additional information beyond that provided by the parties in order to resolve an impasse or a question that may have arisen. The ASLB will issue an order to the appropriate parties defining the specific need. Except when legal matters are involved, if the order is directed to the staff, the LPM is responsible for fulfilling it with appropriate assistance as necessary. If the order is directed to other parties and results in the preparation of safety-related or environment-related documentation, the LPM is also responsible for ensuring that the new material is suitably reviewed and evaluated to permit staff comment at the hearing, if staff comment is requested.

2.5.7 Ex Parte Communications

Once an OL hearing has been requested, the regulations (10 CFR 2.780) forbid communications concerning substantive matters at issue to take place between any party to the hearing (applicant, intervenors, and staff personnel) and any NRC official charged with the responsibility for making a determination in the proceeding. This includes Commissioners, members of their immediate staffs, ASLB and Atomic Safety and Licensing Appeal Board members, or any other NRC officials and employees who advise the Commissioners in the exercise of their quasijudicial functions. In general, the LPM and members of the NRC staff may meet with other parties to the hearing to discuss issues pertinent to the hearing without restriction, provided all other parties are allowed to attend and observe. Circumstances may arise, however, in which some meetings would be inappropriate. For this reason, OGC should be informed about any proposed meetings. The LPM is free to respond to inquiries about the status of the proceeding.

2.5.8 Transcript Corrections

Every word spoken at the hearing is recorded by the court reporter in the transcript of the hearing. Occasionally, the reporter records incorrectly what is said, or typographical errors occur. It is OGC's responsibility to request all regulatory staff participants at the hearing to review their individual areas of contribution to the transcript and to list substantive corrections necessary to produce an accurate transcript. The LPM must coordinate the staff's corrections, which are then sent to OGC and transmitted to all parties for their information, and to the ASLB for adoption.

2.5.9 Proposed Findings and Conclusions

When the hearing sessions have been completed, the chairman of the ASLB will direct all parties to prepare and submit their proposed findings of fact and

conclusions of law for the ASLB's consideration in arriving at its decision. The staff's findings and conclusions are prepared by the assigned attorney with assistance from the LPM and technical review personnel where required. Generally, the applicant is requested to submit the proposed findings and conclusions earlier than the other parties to permit the staff and intervenors to comment on them in preparing their submittals. The LPM should help the assigned attorney prepare the staff's proposed findings and conclusions and review the applicant's and intervenor's submittals. The LPM should be aware of the schedule for submitting the proposed findings so that input can be provided in a timely manner.

The LPM must ensure that timely input is provided to OGC. Through a complete and thorough review, it should be determined that the findings do indeed reflect the staff's position and that any conditions recommended for inclusion in the permit or license are those recommended by the staff, as appropriately modified during the course of the hearing, and in fact are enforceable by the regional office or contain specific fulfillment dates.

In certain areas and situations the exact wording of the proposed finding is critical. In such cases, the responsible review group should be contacted to ensure that the finding is stated accurately.

For conditions containing specific fulfillment dates (e.g., a report required by a specific time), a plan of action must be formulated by the time the permit or license is issued. This plan is docketed and clearly defines responsibilities for fulfilling the requirement and for later amendment of the permit or license, if appropriate.

In addition, the LPM must ensure that the proposed permit or license is drafted well in advance of the prospective decision date, transmitted to appropriate NRR management for review and approval, and when approved, forwarded to staff counsel. The staff counsel will, except in unusual circumstances, serve copies on the Atomic Safety and Licensing Board and other parties and have a copy placed in the PDR and LPDR. If, during the course of the hearing and before the filing of proposed findings, it appears that conditions proposed in the permit or license will require modification, the LPM should again review the proposed permit or license as it is expected to be modified.

2.5.10 Initial Decision of the Atomic Safety and Licensing Board

Upon receipt of the proposed findings and conclusions from the parties, the ASLB will prepare its initial decision. Considerations that enter into the decision are listed in Section VI, Appendix A of 10 CFR 2. This initial decision is transmitted to the Docketing and Service Branch of the Office of the Secretary for issuance.

2.5.11 Commission Decision

Any party to the hearing may submit an exception to the initial decision within 10 days. Initial decisions are subject to review by the Commission before full-power operation is authorized. The Commission may allow the ASLB's initial decision to become the final decision, or may send the case back to the ASLB

for additional testimony or further consideration. The LPM's only responsibilities during this phase of the hearing process are to stay aware of significant events and to identify and alert management to any new issues or information that might be material or relevant, so that the ASLB and the Atomic Safety and Licensing Appeal Board may be kept informed.

2.5.12 Atomic Safety and Licensing Appeal Board

For each application in the hearing process, an Atomic Safety and Licensing Appeal Board (ASLAB) is established. One purpose of the ASLAB is to consider novel issues or questions that are certified or referred to it by the ASLB at the request of a party or a petitioning party to a hearing or that arise from the ASLAB's own review. The latter issues are known as sua sponte issues. The ASLAB must rule on these issues or questions while the hearing is under way. Major or novel questions of policy, law, or procedure may, in turn, need to be certified to the Commission for its determination. The LPM's responsibilities during the ASLAB review phase of the hearing process also are to identify and alert management to any new issues or information that might be material or relevant, so that the ASLB and ASLAB may be kept informed.

2.6 Post-Operating-License Activities

After an OL is issued, the LPM maintains responsibility for the project, serving as operating reactors project manager (ORPM). The ORPM's duties are described in Section 3 of this handbook.

2.7 Other Responsibilities

During the licensing process, various tasks are assigned to the LPM that are related to the scheduling and management of the review of an application. The most significant of these are described in the subsections that follow. In addition, Section 5 of this handbook describes some general responsibilities that apply to both the LPM and the ORPM.

2.7.1 The Data Log

The LPM is required to establish and maintain a data log for each application assigned to him/her. The primary purpose of the data log is to provide a central location for recording key information relating to a project in order to help the LPM do his/her job and to facilitate continuation of the review and evaluation process should the LPM be absent. The data log should be kept in a bound notebook. At a minimum, it should contain information on the current status of all issues, assigned reviewers, and names and telephone numbers of utility contacts.

2.7.2 Management Information

To keep management abreast of the up-to-date status of the review and evaluation of an application, the LPM is responsible for preparing certain periodic reports that address the progress of the review and the status of the schedule. Also, the LPM is required to attend and participate in certain management meetings involving the discussion of the project. Some of the techniques for keeping management informed are discussed below.

2.7.2.1 Operating License Review Management Report

The OL review management report assists management in ensuring that all technical issues are resolved well in advance of licensing. It identifies all open items that can affect the decision to issue the license and identifies those items that may require a condition to the license. The report gives the schedule for obtaining concurrence on issuance of the low-power license and subsequent concurrence on the staff recommendation of readiness for full-power operation. Schedules for submitting SSER inputs are also identified.

The report consists of a narrative description of the licensing status of each plant that is within 1 year of licensing. The narrative section discusses the FSAR review, the hearings, NRC inspections, emergency preparedness allegations, Office of Investigations (OI) probes, and any other significant issues.

2.7.2.2 Daily Highlights

When events occur that are significant to a project, particularly if they are unexpected, the LPM should prepare a short report, "a daily highlight," to alert NRR management. Examples of such events are construction delays during critical times in the licensing review, incidents significant to safety or the environment that occur at a plant, and issuance of key licensing documents such as the SER, FES, and OL. The daily highlight should preferably be limited to one page and is usually reproduced on green paper to alert recipients. See Section 5.18 of this handbook for more details.

2.7.3 Construction Delays

When a significant construction delay is announced, the LPM should request that the applicant submit the pertinent information about the delay to the NRC. A significant delay is one of more than a few months which might entail a delay in fuel load date.

It is not possible to specify the exact information that should be obtained in every case, because each situation is unique. The LPM must exercise good judgment and request only the information that is needed. The objectives are (1) to enable staff to decide whether to continue the review on the existing schedule, extend the review schedule, or stop the review and defer it to a later date; (2) to ensure that the construction delay does not entail any safety or environmental impact, nor negate any of the findings or conclusions already made; and (3) to identify additional information that might be required at a later date.

The information should be submitted within 1 month of announcing the delay. The LPM should evaluate the submittal as soon as it is received.

Specialized review assistance should be obtained as needed. The LPM should then prepare a memorandum to the assistant director, summarizing the information and recommending a course of action.

2.7.4 Construction Permit Extensions

The LPM is responsible for determining the reasonableness of the construction schedule initially and throughout the licensing process. In accordance with

10 CFR 50.55(a) and (b), all CPs state the earliest and the latest dates for completing the facility. If the facility is not completed by the latest date, the CP expires, unless the applicant can show good cause for the delay.

In this event, the Director of NRR may grant an extension of the expiration date for a reasonable period of time.

It is the responsibility of the LPM, during an OL review and evaluation, to be aware of the CP expiration date and how it compares with the staff's date for issuing the OL and the applicant's progress in constructing the facility as reported by the regional office. The applicant should request an extension whenever it or the regional office determines that there will be a delay in construction which will cause completion of the plant to slip beyond the expiration date given in the CP. In all cases, the applicant must submit a request for extension, detailing and justifying the reasons why the construction could not be completed on schedule, at least 30 days before the expiration date.

One of the considerations in granting an extension is a determination by the LPM that no significant hazards are involved. Many of the licensing extension activities are normally monitored and performed by the licensing assistant. No specific guidelines are currently available for evaluating the adequacy of the justification (other than those given in 10 CFR 50.55(b)) advanced by the applicant for extending the expiration date. It is necessary, however, that the applicant be very specific in stating the reasons why the extension is required. The Atomic Energy Act of 1954, as amended, requires that 30 days' notice of intent to extend the CP must be given and that such notice and publication requirements may be dispensed with upon a determination that the extension involves no significant hazards.

If there are significant hazards considerations which require that the proposed action be pre-noticed, it is even more important that the request for extension be submitted by the applicant as early as possible to allow sufficient time for review and development of conclusions.

For an example of a CP extension, see microfiche 35516 176.

2.7.5 Filing Fee

Filing fees that must accompany applications for a CP or an OL have been established by the NRC on the basis of a cost recovery schedule. The fees for the various stages of the licensing process and for various categories of applications are given in 10 CFR 170.

The LPM is responsible for ensuring, through the License Fee Management Branch, that the required fee accompanies the tendered application for a CP and that the appropriate fees have been received from the applicant before a CP or an OL is granted.

3 RESPONSIBILITIES OF THE PROJECT MANAGER OF AN OPERATING REACTOR(S)

The operating reactor project manager (ORPM) has the responsibility for preparing and managing the review and issuance of license amendments, exemptions, relief requests (reliefs), safety evaluations, and other documents associated with the safety and regulation of operating power reactors. The ORPM contributes substantially to the systematic assessment of licensee performance (SALP) review with the regional office (RO) (see also Section 5.19 of this handbook).

Although Section 2 of this handbook is specifically written to describe the licensing project manager's (LPM's) responsibilities, parts of Section 2 also apply to the ORPM. Specifically, some aspects of the licensing reviews, such as conduct of meetings, preparation of requests for additional information, and the hearing process, apply in part to the management of operating reactors. (See Sections 2.4.7 through 2.4.10, 2.4.13, 2.4.15, 2.4.16, and 2.5.) Additional ORPM responsibilities of a general nature are described in Section 5 of this handbook.

3.1 Functional Overview

Issues that are within the ORPM's purview may involve deficiencies in safety-related equipment, operational problems, multiplant actions, license amendments (usually involving technical specification changes), environmental concerns, abnormal occurrences as reported by the licensee or in regional office inspections, and other ad hoc licensing issues. These issues may be categorized as multiplant or plant-specific. Responsibility for monitoring the licensee's licensed activities rests with the ORPM. The responsibility for monitoring the licensee's onsite activities and performance rests with both the regional administrator's staff and NRR.

Changes and modifications may arise from deficiencies in equipment or operations that have occurred at one or more facilities, changes in basic parameters from those identified in the final safety analysis report (FSAR) or environmental report (ER), upgrading requirements of the NRC, or changes in the operating needs of the licensee. The ORPM must ensure that NRR reviews of modifications and changes, when NRR has the review responsibility (not delegated to the licensee by 10 CFR 50.59), are carried to at least the same depth and breadth as is being observed in similar subject areas for reactors currently being reviewed for an operating license.

In managing the various issues of an operating facility, the ORPM should have the most recent revisions of and be familiar with the content of the FSAR, ER, and technical specifications, and all documentation that supplements them. Prior amendments and supporting information are available through the document control system (DCS) (see Section 6.2.1 of this handbook).

The ORPM must understand how the regulations and NRC policy apply to the subject and facility under review and to what extent the standard review plan (SRP)

and environmental standard review plan (ESRP) should be applied to the facility in question (see Section 3.4.3 of this handbook). Further, because the SRP, ESRP, and many of the regulations and guides were developed specifically for construction permit (CP) and operating license (OL) reviews, the ORPM must understand their intent and must develop an approach for implementation that is suited to the particular operating facility. The ORPM should also be familiar with the NRR office letters. In general, the ORPM must ensure that licensing actions do not significantly increase the probability of an accident or significantly reduce the safety margins from those established during the original licensing review of the facility (see Section 3.3.1.1 of this handbook).

The ORPM should maintain accurate files for actions under review and, to some extent, for past actions. To assist in keeping files and filing to a minimum, the DCS (see also Sections 3.5.3 of this handbook) provides for document recall by means of a computer terminal and microfiche copies. Periodic newsletters are issued and training sessions are held on how to use the system effectively. The ORPM must become proficient in using the common searches of the DCS.

The ORPM has the responsibility for conducting reviews in a timely manner. The appropriate management controls should be used to expedite reviews and keep NRC management well informed (see Section 3.5 of this handbook). When conducting reviews, the ORPM should, whenever possible, take into consideration the schedule of the licensee. In this respect, the ORPM should be familiar with the various groups within the NRC and should be able to schedule their input into licensing reviews efficiently. When a full scheduled review is not possible because of time constraints, the ORPM must know enough about the project and NRC procedures to design and implement a course of action to reach the required goal while keeping management informed. Typically, the ORPM must prepare Federal Register notices, license amendments, orders, exemptions, hearing testimony, and assorted correspondence (licensing assistants have sample documents).

The ORPM may be designated a "lead PM" for the coordination of multiplant actions (MPAs) (see Section 3.3.4 of this handbook). These are actions or reviews that need to be imposed on more than one plant and often have resulted from a generic plant problem, a design deficiency, or a change in regulatory requirements. The ORPM may be the "lead PM" on one or more such reviews and must interact with other ORPMs for any changes affecting the assigned plant. More details on MPAs and the lead PM role are given in Section 3.3.4 of this handbook. The ORPM also may have a responsibility in regard to unresolved safety issues (USIs). Details about USIs can be found in Section 3.4.1 of this handbook.

In addition to activities associated with the regulation of operating nuclear power plants, the ORPM may be assigned to other types of facilities or other duties. These may include responsibilities associated with review and licensing of nonpower reactors, review of Government-owned and Government-operated facilities, and reactor decommissioning.

With regard to the continuity of licensing actions, a designated backup ORPM is assigned to each project to which the ORPM is assigned. If the principal ORPM is not available (e.g., on annual or sick leave), and the absence is anticipated, the principal ORPM should contact the backup ORPM for the project to ensure that responsibility is transferred. The ORPM should also brief the backup ORPM on

those actions that might require attention. Furthermore, the principal ORPM is responsible for maintaining all pertinent project documents in such shape as to facilitate the transfer of control to the backup ORPM. The ORPM is responsible for being familiar with the backup project(s) assigned and should be aware of the status of pending actions on these projects.

The ORPM works closely with the licensing assistant (LA) (see Section 6.1 of this handbook). The LA can provide sample documents (letters, orders, amendments, etc.) for the ORPM to use in preparing new documents.

3.2 Management of Reviews

Many reviews in which the ORPM is involved require extensive coordination among various participants. These participants may include, but are not necessarily limited to, one or more of the following: (1) the licensee, (2) the appropriate regional office and resident inspector, (3) the technical review division, (4) the Office of the General Counsel, and (5) other organizations within NRR or NRC. Those organizations that contribute to the completion of an activity should be identified early in the review process. The details of issuing and processing license amendments can be found in Section 3.3 of this handbook and the details of project management control are given in Section 3.5. Interactions with the various organizations mentioned above are described in the sections that follow. Many reviews are done by contractors. The ORPM does not interact directly with the contractor. As a rule, a contract manager in the technical review division manages the contract (see Sections 3.2.3 and 3.5.7 of this handbook).

3.2.1 Interaction With the Licensee

The licensee bears primary responsibility for resolving safety and environmental concerns. In general, the licensee should make proposals for resolving problems with a minimum of input from the ORPM as to the appropriateness of the proposal. The ORPM can then evaluate the licensee's proposals independently. However, the ORPM must also be familiar with scheduler requirements as well as the nature of the proposal so that guidance can be provided to ensure timely resolution. For example, if action by the licensee is required at a forthcoming reactor outage to resolve a problem, and if it appears that the action has significant scheduling impact on the outage, the ORPM should assure himself/herself that the proper actions are being taken. In addition, the ORPM should provide guidance by informing the licensee of established staff positions pertaining to any licensee submittal in progress. The ORPM should seek to eliminate "ratcheting" in which the licensee is called upon to accomplish successive incremental improvements or to respond in areas in which the scope of the NRC reviews exceeds that which is required. The ORPM should, however, know current backfitting positions and ensure that such positions are implemented as, and when, appropriate (see Section 3.4.2 of this handbook).

The ORPM has an obligation to be responsive to the public and should strive to ensure that any delays in completing reviews of proposed actions are those legitimately caused by safety or environmental considerations and not by unnecessary administrative delays. At the same time, the ORPM must ensure that no undue risks to the health and safety of the public or to the quality

of the human environment will result from the proposed action or lack thereof. The ORPM must arrive impartially at a decision to approve or disapprove the proposed action with support as required from others within NRC. When responding to the public, orally or in writing, the ORPM should strive to clearly explain the relevant safety factors associated with decisions while avoiding discussions of those areas, such as economics, that are not within the purview of the NRC.

Information provided by a licensee, upon which an action is to be based, should be in the form of a docketed submittal by the licensee. When time limitations demand, clarifying information can be obtained by telephone or in meetings. Oral communications should not be used as a licensing basis. If the information obtained from the licensee during a telephone conversation or a meeting is to be used as part of the basis for the action under consideration, the licensee must confirm the information in writing before completing the action.

When meetings are to be held, the ORPM is responsible for informing all attendees, obtaining a room and equipment, preparing an agendum, and issuing a meeting notice at least 7 days before the meeting. See Sections 2.4.7, 2.4.8, and 2.4.9 of this handbook for details on conduct of meetings.

Letters provide the primary formal means of communication with the licensee. Policy requires that communications to which the NRC responds or that enter into NRC evaluations must be submitted in writing. NRC regulations, 10 CFR Parts 2 and 9, require that correspondence between the licensee and the staff be made available to the public. In writing letters, the ORPM should attempt to use wording so that, where possible, action is completed in a single letter. Frequently, additional information is requested of the licensee. In these cases, the ORPM should understand and agree with the questions being asked, no matter which staff group generates the questions. Questions should be worded with care to ensure that they evoke a response that is useful in the decision-making process. Requests of the licensee for action or additional information should be accompanied by an agreed-upon completion date. The request for information may be discussed with the licensee to allow clarification or additions that will avoid misunderstanding or incomplete responses. For a discussion on preparing the request for additional information (RAI), see Section 2.4.10 of this handbook.

The ORPM coordinates all NRR correspondence to the licensee, concurs in it, and usually the ORPM (or someone in the management chain) signs the letter. Consult the licensing assistant for the current version of the NRR office letter on signature authority.

In all communications, the ORPM should respect the position of the licensee. Discussions specific to the licensee's plant should be held with the licensee rather than with others, such as vendors, unless the licensee has specifically identified agents for certain purposes. Along the same lines, technical review branches and their consultants should not communicate directly with the licensee. Such communications should be arranged through the ORPM. If the licensee disagrees with actions that the staff is taking, the "appeal" process discussed in Sections 2.4.9 and 3.4.11 of this handbook should be followed.

If the licensee is chronically late in responding to requests for submittals of additional information, action appropriate to the circumstance should be initiated. The first action generally should be telephone contact with the licensee's representative. The licensee's representative should be informed that additional action may be forthcoming. If the telephone contact does not result in satisfactory improvement, the ORPM should use more formal means of communication, such as letters. In any event, the ORPM must pursue the matter to a satisfactory conclusion. The SALP report (see Section 5.19 of this handbook) may be used to document consistently inferior quality or consistent lateness of licensee submittals.

3.2.2 Interaction With the Regional Office

With regard to an operating reactor, the appropriate regional office (RO) has the responsibility for ensuring that the facility operates safely and within the limitations of the application, the license, and the pertinent sections of the Code of Federal Regulations. The major activity in which the RO engages to fulfill this responsibility is the conduct of inspections. The RO has a range of enforcement actions available for obtaining compliance with NRC requirements, including assessment of civil penalties (see Section 3.4.13 of this handbook for the ORPM's role in enforcement actions).

The ORPM and the resident inspector (RI) for an operating reactor share the responsibility for ensuring safe operation of their assigned nuclear power plant. Therefore, the ORPM and RI must develop and maintain a strong and effective working relationship.

The ORPM and RI will assist and augment each other in their respective principal responsibilities. For example:

- (1) The ORPM will, upon issuance, inform the RI of significant changes to the facility license proposed by the licensee, and of licensing actions to be initiated by NRR.
- (2) The RI will advise the ORPM of facility modifications, significant events, significant noncompliance, and enforcement actions.

At the minimum, the ORPM will telephone the RI each week to discuss the status of the plant. In practice, most ORPMs and RIs maintain more frequent telephone contact. The call should be used for routine matters. Nonroutine events/issues should be communicated by the RI or ORPM as soon as possible consistent with the safety importance of the event/issue. ORPM daily highlights (see Section 5.18 of this handbook) should be relayed to the RI. Preliminary notification (PN) by the RO may be supplemented by the RI or other RO staff. Generally, daily highlights are issued by the ORPM and PNs are issued by the RO regarding events at the facility. Each is an early warning to inform management of some event or activity of note. The decision to issue a daily highlight is left to the ORPM's judgment. The philosophy is generally, "If in doubt, issue a highlight." See Section 5.18 of this handbook for additional details.

Communication with the RO through the RI and the appropriate projects branch in the RO should be established and maintained. The ORPM should arrange to visit the RI at the site periodically to become better acquainted with the

plant, its systems and special features, and its staff in association with the RI. It is important to demonstrate a unity of purpose between the ORPM and the RI in carrying out their respective responsibilities for safe operation. A site visit should be arranged consistent with the work schedule of the ORPM and RI. Such visits should be made at least quarterly, and more frequently when issues warrant (see Sections 3.4.11 and 2.4.21 of this handbook). However, the exact frequency and duration of these visits should be determined between the ORPM and his/her management. NRR Office Letter No. 1200 provides additional guidance.

It is of paramount importance that the ORPM and RI thoroughly understand each other's functions. To achieve this understanding, the ORPM should accompany the RI or other region-based specialists in conducting portions of inspections during the ORPM's site visits. Care must be exercised, however, that the ORPM does not proceed to undertake an inspection without first having NRR and RO managers agree on the scope of the endeavor. In general, when approving such an endeavor, managers at NRR and the RO must consider (1) whether the ORPM is qualified by experience or training to conduct the proposed inspection, (2) whether the RI would be needed to spend significant time serving as "tour guide," thus diverting the RI from his/her normal duties, and (3) whether the ORPM's normal duties are sufficiently covered during the time of his/her absence.

The RI reviews all operational reports on the facility and, being on the site, is particularly knowledgeable about the plant and its personnel. The RI can often supply valuable information to support the review of licensing actions. The RI should be kept advised of licensing activities, especially those that directly involve the plant site such as visits and the issuance of amendments. In working with the RI, the ORPM must bear in mind that matters of policy, position, or interpretation should also be communicated to the RO.

3.2.3 Interaction With Technical Review Divisions

The technical review divisions provide technical support in various review areas. The ORPM must decide to what extent technical personnel should participate in a review.

When assistance is required from a technical review branch, the ORPM must identify all the pertinent technical issues that must be addressed. For each issue, the ORPM should identify the appropriate review branch(es), prepare a technical assignment control (TAC) form, and transmit a work request form (see Section 3.5.1 of this handbook). Often a contractor performs the review. In this case, the contractor provides a technical evaluation report (TER) and the responsible review branch must review the TER and incorporate it into a safety evaluation (SE). The SE is provided to the ORPM by memorandum.

The ORPM will also interact with other technical personnel during Advisory Committee on Reactor Safeguards (ACRS) meetings (see Sections 2.4.13 and 3.6.2 of this handbook) and during hearings (see Sections 2.4.12.2, 2.5, and 3.6.6 of this handbook). In these situations, the ORPM coordinates the presentations.

3.2.4 Interaction With the Office of the General Counsel

The Office of the General Counsel (OGC) is responsible for assuring the ORPM that all licensing actions comply with applicable parts of the Code of Federal Regulations and the license and that the proper legal findings have been made.

The principal form of interaction with OGC is concurring on licensing documents. The OGC attorney reviews the entire document, or parts thereof, depending on the transmittal instructions. Orders, exemptions, director's decisions, amendments, and documents of this nature are reviewed by OGC attorneys. The licensing assistant has current knowledge on the types of documents that should be reviewed by OGC.

It is OGC policy to attempt to process licensing actions sent to it within 5 working days of their receipt, and OGC has committed to take no more than 10 working days. If an action is identified as urgent, it will be processed in 2 working days or less, depending on the degree of urgency. As with all scheduling, significant delays in obtaining concurrence should be identified and escalated through management channels. The OGC attorney works informally with the ORPM; for example, the OGC attorney may be asked to review drafts of material. In addition to the concurrence function, the attorney and the ORPM function as a team to provide vital input to the preparation of, and NRC participation in, public hearings (see Sections 2.4.12.2, 2.5, and 3.6.6 of this handbook).

3.2.5 Interaction With the Incident Response Center

The Incident Response Center (IRC) is managed by the Office for Analysis and Evaluation of Operational Data (AEOD). Among other responsibilities, each licensee reports the operating status of each power reactor facility every 24 hours. In addition, events of note are reported to the NRC through the IRC (see 10 CFR 50.72). This information is transmitted to NRR daily via computer.

Significant events are monitored by the staff at the IRC. Details of the operation of the IRC may be found in reports to Congress (NUREGs-0728, -0729, -0730, and -0845). The NRR role during and immediately following a nonroutine event at an operating reactor is best characterized as one of technical support. The IRC has the lead for immediate NRC response to incidents. Procedures that involve complete activation of the Operations Center are fairly well established for reactor events. This section discusses the NRC response mode for those operating reactor events that need to be noted, but are not so severe as to warrant complete activation of the Operations Center.

In the event of an accident at a plant, the ORPM is responsible for providing the reactor safety team with specific knowledge of plant systems and status. The ORPM is also expected to initially brief the executive team with this specific information and to provide them with those facts that will give them a preliminary understanding of the accident sequence. A "Project Manager's Briefing Book" is to be maintained by each ORPM on the assigned plant and will include information on the plant briefing script, facility statistics, management contacts, maps and demography, plant systems, and other specific data as appropriate. For the past several years, ORPMs have prepared briefing books for operating plants. The ORPM should revise these at least once each year. The

ORPM for a newly licensed plant should prepare a briefing book for his/her plant, using an existing briefing book as a model.

3.3 License Amendments

Licensing reviews that culminate in a license amendment and/or technical specification changes represent a significant portion of the ORPM's work.

3.3.1 Initiation and Processing

License amendments involve changes to the license or the technical specifications. The licensee makes amendment requests pursuant to 10 CFR 50.90. When an application for a license amendment is received, the ORPM should review the application for both correct form, content, and fee. 10 CFR 50.30 and 50.90 describe minimal requirements for such applications. In addition, the ORPM should ascertain the nature of the application and verify that the applicant has properly supported the proposed change with a safety analysis and/or an environmental evaluation and no-significant-hazards-consideration findings. This review should be conducted shortly after receipt of an application so that the proper management controls and interfaces can be established in a timely manner (see Section 3.5.1 of this handbook).

License amendments may also originate from unilateral actions on the part of the NRC. The procedures for making such changes are described in Section 3.3.3 of this handbook.

3.3.1.1 Noticing, State Consultation, and No-Significant-Hazards Considerations

See DLOP-228 for a complete description of the "Sholly" and related procedures. (This document was widely distributed; each licensing assistant should have a copy.)

3.3.1.2 Review and Safety Evaluation

The assigned ORPM must review all proposed technical specification changes for operating reactors to verify the validity of the licensee's evaluation and conclusions and to ensure that the licensee has evaluated the potential effect of the change on all aspects of reactor safety. Technical assistance may, as necessary, be sought from the appropriate technical review branch, or the regional office. It is current NRR practice that ORPMs perform reviews of some amendment requests in accordance with the ORPM's expertise and experience. The branch chief whose branch normally performs the review may be consulted for advice as to whether the ORPM should perform the review. The ORPM and/or the technical reviewer(s) should not limit the evaluation to those areas that have been addressed by the licensee but should ensure that the change will not adversely affect any other reactor system or operation. The detailed procedure for initiating amendment reviews is described in a September 4, 1987, memorandum from F. Miraglia and R. Starostecki. ORPMs should be aware that the directives in that memorandum have been changed somewhat in practice, and a revised version may have been issued.

Just as in the review of a CP or OL, a request for additional information (RAI) may be necessary. Section 2.4.10 of this handbook applies generally to the RAI for operating reactor license actions also.

When all appropriate information has been received and reviewed, the review should be documented in a safety evaluation (SE) (see Section 3.4.7 of this handbook). The scope and length of such an SE will depend on the scope and significance of the amendment. Principal contributors to the SE should be identified on the final page of the evaluation.

3.3.1.3 Environmental Evaluation and Review

The assigned ORPM must review all proposed environmental technical specification or license changes for operating reactors to verify the validity of the licensee's evaluation and conclusions and to ensure that the licensee has evaluated the potential effect of the change on the environment. Technical assistance may be sought from the appropriate technical review branch. The review should ensure that the bases for the new technical specification, required by 10 CFR 50.36(a), provide an adequate technical basis for the proposed change or that the existing bases are modified to provide such a basis.

Just as in the review of a CP or OL, an RAI may be necessary. Section 2.4.10 of this handbook applies generally to the RAI for operating reactor license actions also.

When all appropriate information has been received and reviewed, the review by the ORPM should be documented in an appropriate environmental evaluation. Principal contributors to the environmental evaluation should be identified on the final page of the evaluation (i.e., environmental impact statement (EIS) or negative declaration (ND) with supporting environmental impact appraisal (EIA), with a finding that an EIS is not required). Most of the licensing reviews fall in the category of "no EIS or ND is required," and this finding must be given in the final amendment, typically in the SE just before the conclusion (see Sections 2.4.15, 2.4.17, 3.4.8, and 3.4.9 of this handbook).

3.3.1.4 Issuance Procedures

After the safety and environmental evaluations have been completed, a licensing "package" is assembled that contains the following:

- (1) a letter transmitting the amendment to the licensee for signature by the ORPM
- (2) the license amendment to be signed by the appropriate level of management (consult the licensing assistant for the current version of "Delegation of Signature Authority")
- (3) the safety evaluation, and/or environmental impact statement, ND with supporting environmental impact appraisal, or an appropriate finding that an ND or EIS is not required
- (4) input to the monthly Federal Register notice or a separate Federal Register notice

When the required concurrences and signatures are received, the amendment is issued to the licensee and the notice is sent to the Office of the Secretary for transmittal to the Federal Register.

Consult the licensing assistant for the current practice regarding the issuance of an amendment.

3.3.2 Emergency Authorizations

Occasionally a licensee may find that the facility is, or will soon be, in a condition for which the technical specification limiting conditions for operation (LCOs) or surveillance requirements require a plant shutdown or derate condition. Such a condition generally is the result of equipment malfunction that requires the imposition on the facility of an LCO that cannot be satisfied within the permitted time limits. Therefore, the reactor must be placed, or remain, in a shutdown or derate condition. In such cases, the licensee usually requests that a license amendment be issued that provides a basis for continued plant operation. Typically, NRC review and approval is requested on an expedited basis.

The individual receiving the licensee's request is generally the ORPM or the resident inspector. Such requests are not to be used to compensate for questionable management priorities by the licensee that culminate in a last-minute request to the NRC, nor are they intended to be used to undermine State or public participation in the amendment process. If the licensee has consistently misused the emergency authorization procedure, the ORPM may wish to address such misuse in the SALP report (see Section 5.19 of this handbook).

There are two ways to grant relief from an LCO. The following sections (3.3.2.1 and 3.3.2.2) are based on a memorandum from H. Denton and J. Taylor to the regional administrators dated February 27, 1987. ORPMs should be aware that by this time, the specific directives may have been changed.

3.3.2.1 Temporary Waiver of Compliance

A temporary waiver of compliance is a form of discretionary enforcement exercised by NRR and is a vehicle to be used by NRR to grant relief from an LCO. It applies when a license amendment is the appropriate mechanism to resolve the situation but the amendment cannot be processed before the LCO action statement time limit expires. A temporary waiver of compliance with the LCO is to be used to allow the staff sufficient time to process a license amendment. The responsible project director in NRR, with the concurrence of the responsible regional division director, may grant a temporary waiver of compliance if the licensee has demonstrated in a written submittal, provided before the LCO expired, that the facility can safely continue to operate without compliance with the technical specification during the time it will take to process the amendment request. The waiver, including a description of the compensatory measure(s), must be promptly documented in a letter from the project director to the licensee and should be for a fixed period of time. Although the licensee is in technical noncompliance during the waiver period, enforcement action will not be taken for the period during which the waiver is in effect. The waiver period should normally not exceed the two working days it

takes to process an emergency amendment. The waiver period may be longer for a less safety-significant issue so that it can be properly noticed as a proposed license amendment.

The ORPM should proceed to expeditiously process the amendment request, in accordance with existing NRR procedures. If it is determined during the processing of the amendment that it raises a significant-hazards consideration, the amendment should not be granted without prior notice and an opportunity for hearing. In such a situation, any waiver of compliance is to be immediately suspended and compliance with the action statement must be required. The licensee must initiate steps to achieve the required plant status immediately upon being notified of the suspension and implement the required actions. That is, assuming a 7-day action statement for which 3 days have passed, the licensee does not have 7 days to initiate the required steps since time will already have elapsed during the waiver period. In that case, the matter must be concluded within 4 days. Alternatively, the licensee should promptly initiate an orderly shutdown if the action statement had elapsed during the waiver period. Similarly, a confirmatory letter must be sent to the licensee when the waiver is suspended.

3.3.2.2 Enforcement Discretion

Enforcement discretion is a vehicle to be used by the regional administrator to grant relief from LCOs in certain limited circumstances when a license amendment would not be appropriate. The intent of such discretion is to promote safety by not imposing unnecessary transients on an operating plant, or not delaying reactor startup because of the literal reading of the technical specifications under certain circumstances where there is no reduction in safety. Since the problems encountered in such situations are expected to be temporary and nonrecurring, an emergency amendment(s) is not normally needed. Conversely, if an emergency technical specification provides the appropriate resolution for a current issue, then enforcement discretion is not appropriate and NRR should consider a temporary waiver of compliance (see Section 3.3.2.1 of this handbook). Enforcement discretion is not an acceptable substitute for a license amendment.

Use of enforcement discretion is expected to occur infrequently and should occur only for good cause. In general, use of enforcement discretion should be considered to promote the safest course of action. The situation must not have been reasonably foreseen by the licensee, and timeliness of NRC action is of the essence to preclude imposition of a transient. If the licensee knew of the problem and elected not to take action sooner, neither a waiver of compliance nor enforcement discretion is an appropriate vehicle.

The authority to exercise enforcement discretion is granted only to the regional administrator and this responsibility cannot be further delegated. Such relief should be given only if it is clear that operating in excess of the LCO action statement for the period of time that relief will be granted will not place the plant in an unsafe condition. If it is envisioned in advance that such relief would nominally be needed in excess of about 2 days, then enforcement discretion may not be appropriate. If an emergency amendment is appropriate, then that channel should be used. Consultation between NRR

and regional managers is required to ensure that the appropriate mechanism is used. The responsible NRR project director and division director responsible for inspection programs should be informed by telephone of the discretion exercised. The licensee's oral request for enforcement discretion should be followed promptly in writing, documenting the rationale for the request. Whenever enforcement discretion is used, the circumstances, including a description of compensatory measure(s), should be documented in a memorandum by the regional administrator and promptly sent to the Director, Office of NRR. Similarly, a followup letter to the licensee acknowledging the enforcement discretion is required within 24 hours of the oral authorization. All such memoranda and letters should be placed in the PDR and LPDR.

3.3.3 Unilateral Amendments

Changes in technical specifications are usually proposed by the licensee. This is true whether the need for change is first expressed by the NRC staff or by the licensee. If that concern is first expressed by the NRC staff, the licensee is asked to evaluate the concern for its facility and, if applicable, propose plant-specific technical specifications. Unilateral license amendments may be issued using the provisions of 10 CFR 2.204, "Order for Modification of License." See Section 3.6.8 of this handbook for a discussion of NRC orders.

Notwithstanding the provisions for unilateral issuance of technical specification changes, the preferred method for changing a technical specification still is based on 10 CFR 50.90, whereby the licensee submits the proposed change for staff review, authorization, and ultimate publication. In this regard, discussions with the licensee by telephone or at meetings to encourage submittal of pertinent, acceptable changes rather than reliance on the unilateral procedures is required early in licensing actions. By keeping the licensee informed of the staff's plans, the use of the unilateral technique may be kept to a desirable minimum.

3.3.4 Multiplant Action - Committee To Review Generic Requirements

During the process of analyzing operating events, reviewing inspection reports, and reviewing amendment requests, or by any one of a number of means, certain actions may be found applicable to more than one operating plant. Such an action is known as a multiplant action (MPA).

When a potential MPA is identified, the Committee To Review Generic Requirements (CRGR) must review the potential actions for suitability (see NRR Office Letter No. 500). Generally, the appropriate lead technical division prepares the papers for submittal to the CRGR and appears before the CRGR to answer questions and explain details. Details regarding the CRGR review may be found in the Commission-approved CRGR charter (provided to all licensees by the Office of the Executive Director for Operations (EDO) on July 2, 1982, microfiche 14194 001).

When an MPA is approved by the EDO (based on a favorable recommendation by the CRGR), letters are sent to the appropriate facilities that are potentially in need of such an action. A lead ORPM and a lead technical reviewer are identified. If such a request is sent to 10 or more licensees, the lead ORPM should

ensure that appropriate Office of Management and Budget (OMB) clearance is obtained (NRR Office Letter No. 32, Revision 2).

Usually, a generic letter is sent to all licensees, documenting the staff's concerns and need for licensee actions. The letter generally requests a review and response by the utility and may involve a technical specification or other license change. The lead ORPM and the lead reviewer coordinate all the activities involved in the review and culmination of the MPA, including the scheduling of the review effort.

The lead ORPM helps prepare the letter to the utility. The lead ORPM monitors all incoming responses, ensures that the responses are provided to technical reviewers, and that the technical review is proceeding on schedule. The lead ORPM is the chief source of information regarding the MPA. When SEs and/or TERs are issued, the lead ORPM ensures that each ORPM has the necessary documents and that any action required is completed. The lead ORPM answers questions for ORPMs as necessary. The lead ORPM monitors the reports regarding MPAs and verifies the accuracy and consistency of the listings in the safety issues management system (SIMS).

The lead reviewer monitors the preparation and distribution of the SEs and may write general SEs if such is appropriate. If a contractor is involved, the lead reviewer reviews the TER submitted by the contractor and prepares a supporting SE.

In general, the lead ORPM and the lead reviewer work as a team and are the two people who know the most about the MPA. Both individuals work to keep the MPA on schedule, the lead ORPM concentrating on the ORPMs and their actions and the lead reviewer concentrating on the reviewers and their actions.

A quarterly review meeting is held on each MPA. In this meeting, all key personnel of that MPA discuss current status of completion, revise review schedules if needed, and resolve any particular problems. One main objective of these meetings is to ensure timely and technically sound resolution of the MPAs. ORPMs do not participate in these meetings. If an ORPM has a concern about an MPA as it applies to his/her plant, he/she should communicate the concern to the lead ORPM, who attends the meeting on behalf of all ORPMs.

3.3.5 Licensing Fees

According to 10 CFR Part 170, the holder of an operating license must pay a fee, not only for facility licenses, but for other regulatory services rendered. It is the responsibility of the licensee to evaluate any action proposed and submit a fee with the request for action pursuant to 10 CFR 170.32. It is the responsibility of the ORPM to assess the licensee fee evaluation and check the appropriate square on the TAC form. The Licensing Fee Management Branch reviews the ORPM's determination and may discuss with the ORPM any possible changes. The ORPM may also be asked from time to time to review staff time charges against TAC numbers of his/her assigned plant.

3.4 Review of Operating Plants

The ORPM is the responsible and knowledgeable individual for the safety review of operating facilities, which includes the responsibility to determine the

possibility of a generic problem or accident precursor. The ORPM must work closely with the person on the regional administrator's staff who has a preliminary responsibility to review and monitor operation of nuclear power facilities.

The regional office is responsible for the initial investigation and action with respect to operational events. NRR is responsible for changes to the operating license or technical specifications and for evaluating unreviewed safety or environmental questions and modes of operation that are different from those described in the safety analysis report and ER. It is, however, the policy of the Director of NRR that NRR be closely and promptly involved in all aspects of regulation of the facilities. To that end, the ORPM should take the initiative when any significant issue arises, investigate to determine what NRR action is called for, and report his/her findings to management. Care should be taken, however, to avoid duplicating the work of the resident inspector or performing the work of the regional office. Frequent and open communication is the key to avoiding these circumstances.

3.4.1 Treatment of Unresolved Safety Issues

Unresolved safety issues (USIs) are generic issues of high priority that the Commission has approved for study. The status of these issues is reported to Congress in the NRC annual report. The Reactor and Plant Safety Issues Branch (in the Office of Nuclear Regulatory Research) is responsible for the management of the USIs. The resolution of each issue includes provision for the incorporation of the technical resolution into NRC regulations, standard review plans, regulatory guides, or other official guidance documents, and provision for application of the final technical resolution to plants in operation or under construction.

3.4.2 Backfitting Procedures

"Backfitting" means adding, eliminating, or modifying structures, systems, or components of a facility after the construction permit has been issued. 10 CFR 50.109 addresses this issue. Changes made under 10 CFR 50.59 at the request of the licensee or voluntarily by the licensee do not constitute backfitting. Backfitting may be required when the staff finds that such action will provide substantial, additional protection that is required for the common defense and security or the health and safety of the public.

Commission policy and procedures regarding backfitting are contained in NRR Office Letter No. 500 (previously No. 39).

3.4.3 Technical Guidance Documents

Formal requirements are documented in regulations and policy statements; staff-preferred practices (very often erroneously called "requirements") are documented in a number of ways, as is described in the material that follows.

3.4.3.1 Regulatory Guides

The primary purposes of regulatory guides are

- (1) To describe and make available to the applicants and licensees methods of implementing specific parts of the NRC's regulations that are acceptable

and, in some cases, to delineate techniques used by the NRC in evaluating specific problems or postulated accidents.

- (2) To provide guidance to applicants concerning the information needed by the NRC staff in its review of applications for permits and licenses. Regulatory guides are not intended as substitutes for regulations; therefore, compliance with the guides is not a requirement. Methods and solutions different from those set forth in the guides may be acceptable if they provide a basis which demonstrates an equivalent level of protection or effectiveness.

Even though the concept of the guides is to indicate an acceptable means of satisfying an NRC requirement and reflects a level of safety or environmental protection deemed acceptable for new plants, not all such positions need be or should be applied to older plants. Guides contain an implementation section that defines the applicability to operating reactors.

3.4.3.2 Standard Review Plan

The standard review plan (SRP) (see Section 1.4.3 of this handbook) has been prepared for the guidance of staff reviewers in performing safety reviews of applications to construct or operate nuclear power plants. Of necessity, they represent a more advanced state of the art than existed at the time currently licensed facilities were reviewed for the license. Thus, generally, the SRP should not be used directly for reviewing an action on an operating facility. There are times when all operating facilities are deliberately upgraded, such as for the TMI Action Plan items. At such times, the SRP, if current enough, may serve as the basis for the review of licensing actions on operating plants. The ORPM must keep this in mind when managing the review of licensing actions and should apply judgment when dealing with the review and/or reviewer.

3.4.3.3 Environmental Standard Review Plan

The environmental standard review plan (ESRP) (see also Section 1.4.4 of this handbook) has been prepared to guide the staff while it performs environmental reviews of applications to construct or operate a nuclear power plant. The ORPM must exercise judgment in using the ESRP in a manner parallel to that for the SRP (see Section 3.4.3.2 of this handbook).

3.4.3.4 Standard Safety Technical Specifications

Standard formats for light-water-reactor safety technical specifications have been developed for use at facilities with General Electric, Westinghouse, Babcock and Wilcox, or Combustion Engineering reactors. These standard technical specifications (NUREG-0123, NUREG-0452, NUREG-0103, and NUREG-0212, respectively) are intended to be used on all newly licensed plants.

The intent of these standard technical specifications is to eliminate, as far as possible, problems of interpretation of technical specification requirements caused by inconsistent wording or content among the various facilities currently licensed or in the process of developing technical specifications. The standard technical specifications should provide a greatly increased uniformity of technical bases, wording, and format, so that the NRC will be able to present a more consistent and uniform licensing posture to licensees.

The ORPM may also use parts of the standard technical specifications when providing guidance to a licensee for proposing technical specifications; however, unless specific deficiencies are identified, existing technical specifications for a facility are considered to be adequate and need not be upgraded solely to provide consistency with the standard technical specifications.

In using the standard technical specifications, the ORPM should

- (1) Ensure that the specific requirements and bases of the standard technical specifications are applicable or are modified so that they are applicable.
- (2) Ensure that if specific requirements or bases of the standard technical specifications are modified because of differences in design or operating characteristics of the facility, the same level of detail of requirements is provided.

3.4.3.5 Environmental Protection Plan

Beginning in about 1972, operating licenses were generally issued containing an Appendix B, "Environmental Technical Specifications." In isolated cases, the environmental technical specifications were incorporated into Appendix A to the license, the "Safety Technical Specifications." The Yellow Creek decision regarding water quality matters was issued (ALAB-515) and subsequently no environmental technical specifications were issued related to water quality matters. In lieu of standard environmental technical specifications, which were developed to the point of implementation, the environmental protection plan (EPP) was developed. This is a document that contains environmental requirements that are not related to water-quality matters along with general environmental reporting requirements. Operating licenses are now issued with an EPP rather than with environmental technical specifications.

The NRC's role in the water-quality area is limited to the weighing of aquatic impacts as part of its National Environmental Policy Act (NEPA) cost-benefit balance in its licensing decision. That role does not extend to including any conditions of its own in the license for the protection of the aquatic environment. Rather, the Environmental Protection Agency (EPA) or those States to whom permitting authority has been delegated has been given exclusive responsibility for protecting the quality of the water. The regulation of water quality lies in the national pollution discharge elimination system (NPDES) permit. Operating conditions on nonradiological aquatic matters and other nonradiological aquatic monitoring requirements are now the exclusive concern of EPA and permitting States, and are not the responsibility of the NRC.

For those existing licenses for which the facility holds an effective NPDES permit, existing limiting conditions for operation or other nonradiological aquatic monitoring requirements may be deleted as a matter of law. Because the deletion of these conditions would be an action required as a matter of law, no environmental impact assessment need be prepared as a condition precedent to taking the action. However, it is appropriate to prepare a subsequent environmental impact assessment to determine what, if any, impact the removal of these conditions will have on the original cost-benefit balance.

Operating licenses that have an Appendix B, "Environmental Technical Specifications," may apply to use, instead, an EPP.

3.4.4 Review of Facility Modifications - 10 CFR 50.59

After a reactor facility has been constructed and a license has been issued to operate the facility, the licensee may plan to modify the facility. If the licensee's review concludes that no unreviewed safety question or change to the technical specifications is involved, the licensee may make the modifications without prior Commission authorization, pursuant to 10 CFR 50.59(a). Environmental considerations may be handled in a similar manner. The licensee is required by 10 CFR 50.59(b) to maintain records of these modifications. Such modifications are summarized in the licensee's annual operating report. Conversely, changes that involve revisions to the technical specifications or an unreviewed safety or environmental question do require prior Commission authorization as stated in 10 CFR 50.59(c). A construction permit is required for the modification if a substantial material alteration is involved. In those cases that require an authorization, the ORPM evaluates the planned modification and determines its acceptability. The ORPM also determines whether facility operation with the modification involves a significant hazards consideration or environmental question and whether there is reasonable assurance that the health and safety of the public or the quality of the human environment will not be endangered.

A task group has been formed to address policy matters regarding 10 CFR 50.59. When the task force completes its assignment, guidance regarding use and interpretation of 10 CFR 50.59 will be published for use by licensees. Meanwhile, the following paragraph documents a prevailing ORPM practice.

All changes implemented under 10 CFR 50.59 are documented in a yearly report by the licensee. On receipt of that report, the ORPM should request a TAC number and should review the report. The review should include an onsite audit of issues selected by the ORPM. The objective of the review is to determine if there is reasonable assurance that the changes and tests in the report meet criteria in 10 CFR 50.59. Theoretically, between the ORPM and the RI, there should be awareness of most of the changes and tests that took place during the year, and that questionable ones have been brought to the attention of either individual. The review of the yearly report, therefore, should just be a confirmation of actions; for aspects of actions that cannot be entirely covered under 10 CFR 50.59, individual licensing actions should have been opened to address them. The ORPM should document his/her review of the report, indicating agreement or disagreement with the licensee. (Microfiche 45964 265 provides an example of such documentation.)

3.4.5 Review of Operating Reports

Operating reports required to be submitted by the licensee take various forms and are specified in the reporting requirements section of the facility technical specifications. Because the technical specifications usually do not repeat those reports required by the Code of Federal Regulations, Regulatory Guide 10.1, "Compilation of Reporting Requirements for Persons Subject to NRC Regulations," has been prepared. This guide summarizes and lists all reports

required by the various sections of Title 10 of the Code of Federal Regulations. The ORPM should study all operating reports submitted by the licensee and be alert for items that might require licensing action or that have an effect on a licensing action in process. In addition, the ORPM should read each inspection report prepared by the regional office staff for his/her assigned facility. The bulk of reports received from the licensee take the form of licensee event reports (LERs) and periodic operating reports, discussed individually below.

On occasion, the ORPM provides feedback to NRR divisions of significant or potentially significant safety and environmental information.

3.4.5.1 Reportable Events

10 CFR 50.73, "Licensee Event Report System," requires that those operational events defined as reportable events be reported to the NRC. The purpose of prompt notification to the NRC is twofold. One purpose is to enable NRC to audit the actions of the licensee regarding resolution and corrective measures. The second is to enable NRC to conduct immediate inspection or take other actions deemed necessary for protecting the health and safety of the public in light of the safety significance of the event or for protecting the environment.

The regional office (RO) is responsible for the initial inquiry and contact with licensees regarding reportable events. In cases in which the licensee's operations can be returned to the preoccurrence status, the cause of the difficulty is understood, and no significant design or operational adequacy problems appear unresolved, the RO will retain responsibility for completing the evaluation of the occurrence. The ORPM should evaluate investigate significant occurrences to determine what NRR action is indicated and to keep abreast of what action the RO is taking. If the ORPM believes an unreviewed safety consideration or an environmental consideration is involved, he/she should initiate a licensing action.

If, during its inquiry, the RO determines that problems have arisen that may involve changes in technical specifications, modes of operation different from those described in the FSAR or ER, unreviewed safety questions, or environmental considerations, the RO will so advise NRR by memorandum and may request NRR to assume lead responsibility for evaluating the occurrences and determining the safety or environmental significance (see Section 3.2.2 of this handbook).

Another important use of the licensee event reports (LERs) is to provide data upon which trending or operational experience analysis can be performed. The Office for Analysis and Evaluation of Operational Data (AEOD) has the primary agency responsibility in this area, although important roles can be played by the ORPM or the Events Assessment Branch. Usually AEOD or the Events Assessment Branch will contact the ORPM for additional information on his/her plant to support ongoing reviews.

3.4.5.2 Periodic Operating Reports

The technical specifications in all licenses contain a section that delineates information required in the periodic operating reports. To this end, Regulatory

Guides 1.16, 1.21, and 4.8 provide written guidance concerning the information that should be contained in the routine periodic operating reports and reportable events reports for power reactors.

If consideration of the above reveals no unsafe or potentially unsafe condition, or no unacceptable environmental impact, no action by the ORPM is necessary, except to document the results of the review by memorandum to the file. However, if modifications to the facility have been made that should have been submitted for review, the ORPM should immediately advise his project director of the situation and propose appropriate actions. These actions might include discussions with the licensee or with the resident inspector, depending on the situation, or might consist of recommendations to management concerning remedial and investigative measures that should be taken. These measures may take various forms, such as requiring the licensee to submit additional analyses, changes to technical specifications, or recommending to licensing management that voluntary suspension of operations or direct suspension of operations be made.

3.4.5.3 Inspection Reports

The regional administrator's staff, including the resident inspector, performs numerous inspections at each facility. The ORPM receives copies of the inspection reports for review and information. These reports indicate the results of the inspections that may be related to a licensing action being processed. The resident inspector keeps track of all licensee event reports (LERs) and indicates the disposition of these and any open items resulting from inspections. The ORPM should be actively involved with these inspection reports (see Section 5.17 of this handbook for guidance).

3.4.6 Reactor Shutdown

The ORPM is continually reviewing items having safety significance. Most items will be judged to be of low relative significance. Occasionally, the ORPM may conclude as the result of a review that the licensee should not continue to operate the facility. Changes to the limits of the license/technical specifications and/or initiation of safe and prudent operational practices may be required to attain the desired degree of safety. The ORPM should alert the project director to the facility condition and the reasons reactor operation should be terminated or curtailed. If the project director, with necessary management concurrence, agrees that reactor operation should be terminated or curtailed, the ORPM should notify the licensee about the NRC staff concern and should prepare the appropriate communication from NRC management.

Concurrent with this discussion, the ORPM should prepare a memorandum that describes the condition and safety considerations. If the licensee plans to shut the reactor down and/or corrects the condition, the memorandum should be appended to indicate the action proposed by the licensee and the staff's concurrence or nonconcurrence with the licensee's plan. However, if the licensee plans to continue operation, the memorandum should be used to inform management about the safety concern, to recommend a course of action, and to justify management action that could result in shutting down the reactor.

3.4.7 Safety Evaluation

Whenever a licensing action is reviewed and found acceptable to the staff, a report called the safety evaluation (SE) is usually prepared summarizing the staff findings. This SE consists of at least three basic parts, although variations are certainly in order at times. Generally, the same principles apply as for safety evaluation reports (SERs) for CPs and OLs, except that the number of issues in SEs is greatly reduced for operating plant actions. Usually only one or two issues are involved for most SEs on operating plant actions.

An introduction contains the pertinent reference material (i.e., date(s) of application and any supplements, the name of the licensee, the name of the facility, and the associated docket number(s) and license number(s)). A brief introduction to the subject of the action may be included. If the action involves a significant background, this may be included in the introduction or as a section titled "Background."

The discussion and evaluation of the action are key elements of the SE. This section must provide a basis for the staff approval of the actions, referencing guidance documents where appropriate. A summary paragraph emphasizing the basis for the approval is generally appropriate.

Finally, there must be a "Conclusions" section. This contains a safety conclusion, and if there is no environmental impact appraisal, it may also contain an environmental conclusion. These conclusions both contain the necessary words to make issuance of the action legal. The results of the review must lead to and form the basis for these conclusions. Generally, the environmental conclusion is negative and is included in the SE for convenience. Both a safety and an environmental conclusion are necessary for each action.

When appropriate, a fourth part, addressing the schedule of implementation, should also be present. This part is written after discussion with the licensee. Section 3.4.8 and NRR Office Letter No. 501 provide details about implementation scheduling.

It is essential for the ORPM to review all SEs to ensure that there is a proper technical basis to support the conclusion and that the SE is a coherent, self-contained document. The ORPM should also check to see that terminology is consistent. In addition, the ORPM should check to see that the SEs have no open issues, and that all inspection or verification requirements are addressed by followup actions. Ideally, if additional information and/or a license commitment is needed, this requirement should be satisfied before the SE is issued. The ORPM should assist the technical reviewer in this aspect by ensuring that any such open issues are really essential to the safety of the facility and then obtaining the necessary information.

As for the CP or OL SER, the ORPM's name and the reviewer name(s) should appear at the end of the SE. Names of contractor reviewers are generally included in the TER, which may be incorporated as a part of the SE.

3.4.8 Implementation of Safety Issues - Safety Issues Management System

The ORPM's regulatory responsibility is not yet complete when an SE is issued (Section 3.4.7 above). Even though the technical review is completed, the

safety improvements (e.g., installation of hardware, revision of plant procedures, and training of personnel) may not have been fully implemented by the licensee.

The NRC tracks the implementation of safety improvements by use of the safety issues management system (SIMS), a computer program that uses TAC information (see Section 3.5.1 of this handbook) as part of its input. From time to time, a SIMS report is provided to each ORPM showing the implementation status and verification status of each licensing action. The ORPM updates the implementation status, and the regional office updates the verification status of each licensing action. NRR Office Letter No. 501 provides details.

3.4.9 Environmental Impact Appraisals

As does the SE, the environmental impact appraisal (EIA) contains at least three basic parts. The introduction and the evaluation follow the same principles as apply to the SE. The conclusion varies, depending upon whether a negative declaration is in order. An environmental review, required for all actions, may lead to the single conclusion of no impact, in which case no EIA is needed. If the impact is in question, an EIA must be prepared. In this case, the impact may be insignificant and then the EIA is the basis for a negative declaration (ND). See the licensing assistant for the current format.

3.4.10 Environmental Impact Statements

Generally, environmental impact statements (EISs) are not needed for environmental reviews of operating plants. In the special case that the impacts may be significant, an EIS may be necessary. Steam generator repair programs and decontamination have been subjects of EISs for operating facilities to date. Generally, when such an issue becomes apparent, there will be much discussion with technical, management, and legal staff before the decision can be made. In any case, an EIA must be prepared as a necessary step in reaching the conclusion to prepare an EIS.

The discussions in Sections 2.4.15, 2.4.16, and 2.4.17 of this handbook, in regard to preparing an EIS apply, except the number of issues involved is generally greatly reduced from those in the operating license EIS. Probably the two most significant actions involved are (1) a prenotice of the intent to prepare an EIS and (2) the requirement to circulate the draft EIS for comments. The comments must be responded to in the final EIS. The comment period and the preparation of the responses may add a couple of months to the preparation time, and, of course, no license action may be issued until the final EIS is issued or, if there is a hearing, after the Atomic Safety and Licensing Board decision is rendered. The ORPM is identified on the front page of the EIS as the person to contact for further information. In addition, principal contributors are identified as for the SE.

3.4.11 Site Visits

The ORPM is expected to visit the site and nearby area soon after assignment to the facility in order to become familiar with the facility, the local area, the staff of the licensee, and the resident inspector. The ORPM should gain unescorted access to the assigned site. Quarterly visits, as a minimum, are

encouraged to retain the awareness of the status of the facility. However, the exact frequency, duration, and nature of these visits should be determined between the ORPM and his/her management. NRR Office Letter No. 1200 provides additional guidance. In addition, when technical reviews require the ORPM and/or the technical reviewer to visit the site, the ORPM should make all of the arrangements and coordinate the visit with the licensee, the regional office, and the resident inspector. The ORPM prepares the agenda for the visit, conducts any meetings associated with the visit (if possible), and prepares the meeting summary. The ORPM reviews and issues any subsequent requests for additional information arising from the visits. See NRR Office Letter No. 1200 for additional guidance.

From time to time, NRR receives requests from other offices (e.g., Commissioner's office, International Programs) to make arrangements for nonregulatory site visits. The ORPM should consult with his/her project director, and seek additional guidance from NRR Office Letter No. 1200.

3.4.12 Appeals Meetings

If the licensee does not agree with the staff's position on a given issue, the appeal procedure, which is normally described to each applicant when the application is docketed, applies to the review of actions for operating reactors (see Section 2.4.9 of this handbook). Briefly, the request should come through the ORPM, although this is not required. The ORPM should keep management informed and perform the usual ORPM functions as for any other meeting. (See Sections 2.4.7, 2.4.8, and 2.4.9 of this handbook.)

3.4.13 Review of Updated Final Safety Analysis Report

As stated in Section 2.4.25 of this handbook, the final safety analysis report (FSAR) is the principal document on which the NRC bases a safety determination and issues an operating license. The licensee should not make any more amendments to the FSAR upon receipt of an OL.

Post-OL plant changes, revised analyses, etc., should be documented in a new document, the updated FSAR (UFSAR), in accordance with 10 CFR 50.71(e). The UFSAR, to be revised yearly by the licensee, serves as the official source of current plant design and analyses. Since all plant modifications should already have been addressed under 10 CFR 50.59, or as amendments to the OL/technical specifications, the UFSAR should not be a source of initial communication of new information.

There is, therefore, no formal NRR program to review the UFSARs. The ORPM should, on receipt of an amendment to the UFSAR, review the changed pages to confirm that indeed all changes are appropriately covered by licensing actions, 10 CFR 50.59 reports, or regional inspection activities. If new and unaddressed information is discovered, the ORPM should initiate appropriate licensing action, and should notify management.

3.4.14 Enforcement Conference and Enforcement Action Package

From time to time, the regional office may decide to hold an enforcement conference with a licensee to discuss issues that are of particular concern. The

ORPM should be aware of such meetings and should notify his/her management. In general, the ORPM attends the conference and actively participates in the discussion with licensee personnel. In addition, if the ORPM and regional office so desire, NRR specialists may be requested to also attend the conference.

The regional office is responsible for preparing the enforcement action package. Before it is issued to the licensee, the regional office would seek comments and concurrence from the Office of Enforcement, which in turn would seek the same from NRR. When such a package arrives, the ORPM should be ready to knowledgeably inform his/her management and make recommendations. The licensing assistant may have samples of NRR memoranda written to address enforcement action packages.

3.5 Project Management Control

In managing the various types of reviews among the groups within the NRC, the ORPM uses project management controls. These controls serve one or both of two functions. First, they allow the ORPM to identify significant technical issues and the schedule within which they must be resolved and/or provide a vehicle for their resolution. Second, they alert NRR management to existing or potential problems.

3.5.1 Project Initiation

The ORPM initiates any review by issuing a technical assignment control (TAC) form. The initiating event is generally an application from the licensee or an NRC action. In either case, the TAC form is filled out by the ORPM responsible for the facility, or by the lead PM in the case of an MPA, and is sent to the NRR program management, policy development and analysis staff for the issuance of a TAC number(s).

The TAC number will identify that action throughout the review and issuance of the licensing action. A TAC number should be issued for each facility on each action, and in the case of MPAs, there should also be a separate TAC number for the lead PM activity.

After a TAC number is obtained, the ORPM contacts the review section leader or branch chief believed to be responsible for the review and sends him/her a completed work request form, with the TAC number, nature of the review, and a proposed target date. When the form is signed by the review branch chief and returned to the ORPM, the review schedule is set. It may be changed by circumstances that occur after the schedule is issued, but only by negotiation with all parties concerned. A copy of the current work request form may be obtained from the licensing assistant.

3.5.2 Project Manager's Report

Once every two weeks, the ORPM reviews his/her project and updates the project manager report (PMR) as necessary. The PMR is a computerized printout of all active licensing actions and their status and projected completion dates.

3.5.3 Information Sources

Numerous sources keep the ORPM informed. The nuclear document control system (NUDOCS), which is managed by the Document Control Branch (see Section 6.2.1 of this handbook). This branch receives all incoming documents and distributes them to those people and groups on a predetermined distribution list. The regulatory information distribution system (RIDS) prints the distribution on a cover sheet for each document so the ORPM can determine which reviewers have received the document. The documents are put on microfiche and can be located by using a DCS terminal. Classes are available to train ORPMs in the use of the terminal, and newsletters are issued periodically to call attention to new features. Assistance is also available from experienced peers. The ORPM should become proficient in performing common searches on the DCS.

The ORPMs are on distribution lists for some NRC reports, pertinent NRC manual chapters, generic letters, NRR office letters, and other documents.

3.5.4 Contract Assistance

Many licensing actions are reviewed by contractor personnel under the management of contract managers. The ORPM must be aware of the status of the contractor review and must manage the aspects of the review that have to do with licensee contacts. All personnel should adhere to the following procedures related to the use of contract assistance in preparing safety evaluations.

- (1) Information obtained from licensees that is used as a basis for safety evaluations should be docketed. Exceptions can be made; however, these exceptions should be made for matters of minimum substance and should occur only with the ORPM's concurrence.
- (2) All telephone contacts with the licensee should be made through the ORPM. The ORPM need not be present for the entire phone call when matters of clarification are being discussed, but must be present when the licensee is requested to provide additional information or commitments. If the ORPM is unavailable, the backup ORPM or the project director should be contacted.
- (3) If, as a result of telephone discussions, additional information or commitments is deemed necessary for completing the review, this fact should be prepared by the contractor/reviewer for transmittal to the licensee promptly upon completion of the telephone discussion. The ORPM will determine whether to transmit the request to the licensee on the basis of the significance and complexity of the questions and the licensee's oral commitment to provide a timely response.

3.6 Other Responsibilities

Several areas of responsibilities for the ORPM either do not fall into any category previously considered or include several categories. In addition, general ORPM responsibilities listed in Section 5 of this handbook also apply.

3.6.1 Response to Inquiries

Correspondence regarding operating facilities received by the NRC from external sources that are not considered routine fall into the category of principal correspondence. The major sources of principal correspondence include correspondence from Congressional sources, Government agency heads, State and local officials, the general public, foreign officials, and various industrial and civic organizations.

Routine correspondence or other inquiries such as phone calls will be handled by the ORPM. In answering written or phoned inquiries, the ORPM should keep in mind that NRC should keep the public informed but also should be aware that release of preliminary information prematurely can become a serious problem at the time of hearings or other formal proceedings. Judgment is required in responding to inquiries of this type. The treatment of correspondence and public inquiry is also described in Section 5.7 of this handbook.

3.6.2 Advisory Committee on Reactor Safeguards

Generally, the ORPM does not meet with the ACRS with any regularity. The ACRS responsibilities and interactions with the NRC staff relative to new reactor projects are presented in detail in Section 2.4.13 of this handbook. Those general procedures are applicable to the cases that are submitted for ACRS review regarding operating facilities. Such cases include (1) full-term license reviews, (2) review of testing facilities as defined in 10 CFR 50.2(r), (3) significant power increases for operating reactors, (4) major modifications or unreviewed safety questions that the staff concludes warrant ACRS review, and (5) reviews performed for the U.S. Department of Energy (DOE) or Department of Defense on reactors greater than 10 MW or having unique or unusual safety considerations. Contact the assigned NRR ACRS coordinator when the need arises.

3.6.3 Interpretation

The ORPM is often requested to interpret regulations, license conditions, technical specifications, and FSARs. For interpretations to be binding on the Commission according to 10 CFR 50.3, any interpretations of the regulations must be issued in writing only by the General Counsel. Less formal interpretations concerning day-to-day application of the regulations may be provided by the ORPM after consultation with OGC and others, as needed.

Most of the interpretation requests received by the ORPM will be requests from either the resident inspector, the regional offices, or the licensee to interpret license conditions or technical specifications. When it is necessary to establish an interpretation, or when a given interpretation is challenged, NRR, as the organization that approved and issued the license and technical specifications, and the ORPM in particular, as the responsible individual, will provide the interpretation. The Technical Specifications Branch has the expertise to interpret requirements and should be contacted whenever the PM deems it appropriate. If the licensee expresses concern about a difference in interpretation of technical specifications between NRR and the RI or the RO, the ORPM should first attempt to resolve the difference with the RI or the RO. If this cannot eliminate the licensee's concern, the licensee should be advised to submit a request for an interpretation to NRR.

FSARs are subject to NRR interpretation in that NRR ascribed a certain meaning during the licensing process and that meaning should be maintained.

3.6.4 Review of Safeguards Information

Industrial security plans, guard training plans, contingency plans, and such provided by the licensees are considered information within the meaning of 10 CFR 73.21 and are customarily withheld from public disclosure. Such information must be stored by the Safeguards Branch, which also performs reviews (see Section 3.2.6 of this handbook). No written evaluation of the withholding from disclosure is necessary. Requests for additional information from the licensee relating to security plans are also withheld from public disclosure.

3.6.5 Briefings on Operating Reactor Events

On a periodic basis, usually weekly, senior NRC management (including NRR and AEOD) are briefed on significant operating reactor events. The intended function of the briefings is to inform senior management in a clear and concise manner about recent events that have important safety or license implications. To ensure that this objective is met, the following procedures will be used in preparing future briefings.

- (1) The Events Assessment Branch (EAB) is responsible for determining when an operating reactor event appears important enough to be included in the next briefing, and informs the ORPM accordingly. The ORPM should attend the briefing regardless of whether he/she is leading the discussion. This is necessary since the ORPM is the principal headquarters spokesperson for the assigned operating reactor facility.
- (2) If requested by the EAB, the ORPM will prepare a short presentation (about 5 minutes) that briefly explains the event and that stresses the safety and licensing implications.

If followup actions are needed, they are reported in the briefing summary prepared by the EAB. EAB periodically monitors the assignments and verifies that they are completed.

3.6.6 Hearings

As indicated in Section 2.5 of this handbook, a mandatory hearing is held before a construction permit may be issued. An opportunity for a hearing is provided before the operating license is issued, and if no hearing is requested none is held. An opportunity for a hearing is also provided for licensing actions involving amendments to OLs. When an opportunity for a prior hearing is afforded, no licensing action can be taken until the hearing notice period (usually 30 days) is over, and more important, if a hearing is requested and granted, no licensing action may be taken until the Atomic Safety and Licensing Board has issued a decision. This could result in a significant delay before the licensee may proceed with the change involved. In some cases (e.g., fuel pool expansion or steam generator repair), timing is very important.

The basic principles for a hearing on an operating facility are the same as those for the construction permit or operating license. Of course, the potential number of issues is greatly reduced for an operating facility because only the issue noticed is available for intervention. As discussed in Section 3.2.4 of this handbook, the ORPM and the OGC attorney operate as a team in preparing the testimony and going to the hearing. Several witnesses may be needed and the ORPM works closely with them also.

The Director, NRR, should be personally and promptly informed by the ORPM of any hearing request by an elected official. The ORPM or a designated NRR representative should be present at the hearing.

3.6.7 Director's Decisions

Under the regulations in 10 CFR 2.206, any person may file a request with the Director of NRR to institute a proceeding pursuant to 10 CFR 2.202 to modify, suspend, or revoke a license, or for such other actions as may be proper. If the Director agrees with the petitioner and takes the requested action, copies of the documents involved in the action are sent to the petitioner to indicate that the action was taken. If the Director does not agree to take the requested action, the ORPM, in consultation with an OGC attorney, will prepare a document called a director's decision, which contains the basis for the Director's refusal to take action in regard to the request. A director's decision contains the essence of the request and an evaluation of the requested action that forms a basis for the decision. Procedures for handling requests for 10 CFR 2.206 actions may be found in NRR Office Letter No. 600.

Director's decisions are reviewed by the Commission. The Commission may on occasion determine that additional action by the staff is required after a director's decision is issued.

3.6.8 Orders

When the staff finds that a certain action on the part of the licensee is necessary to protect the health and safety of the public and the licensee refuses to comply with staff requirements in this regard, an order for modification of license (10 CFR 2.204) may be issued requiring the licensee to do as the staff requests. This order is much like a director's decision in content because the essence of the action is discussed and a safety evaluation is prepared as a basis. An order, when issued, has the force of law behind it. It may require modification of the license, lowering the power level while corrections are made, or even shutting down the reactor.

In addition to a direct order, there are variations. If the licensee agrees in writing to the requested staff action and the staff finds that the written commitment needs enforcement strength behind it, a confirmatory order is issued. The basic difference is that the licensee is ordered to comply with the written commitment. Thus, any failure to live up to the commitment bears a stronger enforcement penalty than if it were simply a written commitment.

Similarly, if the staff has reason to believe that an unsafe condition exists at a licensed plant, the licensee may be issued a show cause order (10 CFR 2.202). The licensee will have to supply information and/or analyses demonstrating that

the unsafe condition does not exist or that it has been remedied. Depending on the severity of the condition, the facility may or may not be permitted to operate during this period.

An order is an exercise of the Commission's legal authority; therefore, OGC must be involved early in the process of drafting the order. OGC concerns must be resolved to assure that the order is correct. Actions taken by order are subject to a request for a hearing by the licensee. Actions imposed by order must be defensible before a licensing board.

The licensing assistant can provide samples of issued orders.

3.6.9 Exemptions

When a licensee finds that it is not possible to meet a requirement of a rule, an exemption can be requested (10 CFR 50.11, 10 CFR 50.12). The staff reviews the request and if it finds the request acceptable issues a document called an exemption. Again, the elements of the document are similar to a director's decision and an order in that an exemption, when issued, must contain the request and a staff safety evaluation as a basis. An environmental assessment must be prepared and issued before issuing the exemptions. An exemption will free the licensee from the requirements of the rule involved. Denial of an exemption must also be based on a staff safety evaluation.

The licensing assistant can provide samples of issued exemptions.

3.6.10 Reliefs

On occasion, a licensee may propose a certain program that the staff finds acceptable. The staff may approve this program by a letter that does not incorporate the program in the license. Although the program is required by a rule, the details are not specified in the rule. In such a case, if the licensee subsequently finds that part of the program has become difficult or impossible for one reason or another, the licensee may request relief from that portion of the program. The most common type of relief is one concerning American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Inservice Inspection."

As in the case of orders or exemptions, and for that matter, all staff licensing actions, the staff must prepare a safety evaluation or its equivalent that provides the basis for the approval or disapproval.

The licensing assistant can provide samples of issued reliefs.

3.6.11 10 CFR 50.54f Letters

Under the regulations in 10 CFR 50.54, certain conditions are listed that are deemed conditions to every license issued. Paragraph f of 10 CFR 50.54 states that the licensee will upon request of the Commission submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked. Information that the staff needs to review situations that may involve a serious question regarding the safety of the plant (e.g., unreviewed safety issues) that may lead to

modification, suspension, or revocation of the license can be requested under 10 CFR 50.54f. Under this kind of request, the licensee must supply the information.

3.6.12 Review of Proprietary Information

ORPMs have the responsibility of reviewing and/or assisting the licensing assistants in the review of requests pursuant to 10 CFR 2.790(b) for withholding proprietary information from public disclosure. For some documents, such as vendor information supplied in response to letters generated within the technical divisions, information provided during meetings and rulemaking procedures, and generic reports, the technical division personnel may perform the proprietary review. Licensees should be required to submit proprietary information in one document and to submit a nonproprietary version in another document.

In the proprietary review, the ORPM should attempt to achieve an effective balance between legitimate concerns for the protection of competitive positions and the right of the public to be fully apprised of the bases for and effects of the proposed licensing action or involved safety issue. The ORPM must determine, from the information given and the justification provided by the licensee, that the information is indeed proprietary and its disclosure would adversely affect the interest of the company involved.

If the ORPM finds withholding the information to be justified, the ORPM will prepare a letter to the licensee granting the withholding action. The letter should identify the document in which related nonproprietary information may be found. For an example of such a letter, see microfiche 43739 298.

If a request for withholding information does not, in the ORPM's opinion, include sufficient justification for withholding the information or if the information is already available in the public record or would not jeopardize the competitive position of the company, a letter is sent to the company requesting additional facts or justification for the withholding action within 30 days. If a request for withholding information is denied, the ORPM is responsible for sending a letter informing the licensee of the denial and stating the reasons for the action. This letter provides 30 days for the licensee to withdraw the document, or the document is placed in the public document rooms. Additional guidance may be found in NRR Office Letter No. 602.

3.6.13 Need for Commission Briefing by the Office of Investigations

On September 2, 1987, a memorandum was issued to all project managers to direct them in their determination of the need for the Office of Investigations (OI) to brief the Commission.

By memorandum dated July 27, 1987, the EDO told the Director of NRR and regional administrators to determine whether ongoing OI investigations would have an impact on restart decisions, and whether a Commission briefing by OI is required. For restart decisions, NRR was directed to assist the regional administrator in determining, eight weeks in advance of full-power licensing or restart, which investigations appear to affect that decision. The ORPM should contact the regional office to develop an NRR position regarding OI investigations that

could affect these decisions. Nine weeks before the scheduled restart date, the ORPM should inform the Associate Director for Projects of those investigations that should be completed before a restart decision.

Two weeks before restart decisions, OI must be informed by memorandum regarding the need for a Commission briefing on investigations. The regions were given the lead role. NRR has asked the regions to work with the ORPM in determining whether an OI briefing is necessary for a restart decision. Additional information may be obtained from the NRR allegations coordinator.

3.6.14 Disclosure to Licensees of Pending Investigations and/or Criminal Referrals

See NRR Office Letter No. 1002 for information.

3.7 Performance Indicators

The Office of the Analysis and Evaluation of Operational Data (AEOD) collects certain vital operational statistics such as number of reactor trips, ESF actuations, etc. The data are computerized and published in quarterly reports where the frequencies of occurrence of various operational events at each plant are compared to national averages.

Steps are being taken to make plant-specific reports available to ORPMs for transmittal to licensees. The ORPM should review these reports and treat them as useful sources of information about his/her assigned plant. For example, a plant with a scram frequency consistently much higher than average should create the need for ORPM actions. As a minimum, the performance indicators should provide a "flavor" of plant operation which can be compared with that obtained first-hand during site visits. The accumulation of such impressions would help to enable the ORPM to participate meaningfully in the SALP (systematic assessment of licensee performance) process.

3.8 Decommissioning Reactors

Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors," provides guidance on the various decommissioning options available to the licensee. On June 27, 1988, a new rule on decommissioning was published. Decommissioning options are:

- (1) in-place entombment (ENTOMB)
- (1) mothballing (SAFSTOR) with delayed dismantling
- (3) dismantling (DECON)

Regulatory Guide 1.86 is being modified to reflect the new rule.

Each of the above options leads to a modification of the operating license of the facility in question. SAFSTOR and ENTOMB involve a license amendment that would permit the licensee to possess but not operate the facility. This change would allow the licensee to considerably reduce the required surveillance activities. Following removal of residual radioactivity to levels acceptable for release to unrestricted access (DECON or delayed DECON), the operating license may be terminated. The decision to terminate the license depends on the ability

of the licensee to decontaminate the facility site to a level that would permit unlimited access. Facilities that cannot be sufficiently decontaminated can be retained for up to 60 years in a SAFSTOR status. Because potentially significant environmental considerations are involved with the type of decommissioning effort proposed, an environmental review to satisfy the Commission's NEPA responsibilities is performed concurrently.

3.8.1 ENTOMB

Inplace entombment (ENTOMB) involves removing all fuel and radioactive fluids and wastes and possibly removing selected nuclear components. The remaining radioactive components are sealed into the containment structure. This technique was used on the DOE-owned BONUS reactor. Early in the procedure, once fuel has been removed from the core, the facility license can be amended to the "possession only" status.

Inplace entombment allows the licensee to possess, but not operate, the facility. It is worth noting that no commercially licensed facility has been decommissioned in this manner. Those reactors that have been entombed were either owned by DOE or other Federal Government agencies.

3.8.2 SAFSTOR

SAFSTOR involves removing all fuel and radioactive wastes and liquids followed by minimal decommissioning activity. In general, only those tasks are performed that are required to place the facility in a state of protective storage. The assigned ORPM should review the decommissioning plan submitted by the licensee to ensure that all proposed operations can be performed safely and within the constraints of 10 CFR 50.82 and other regulations. Like entombment, the "mothballed" facility is maintained in the possession only status.

3.8.3 DECON

Removal of radioactive components and total dismantling of a facility (DECON) is the most extensive type of decommissioning activity. The objective is to decontaminate the site to a level of radioactivity low enough to allow unrestricted access. In the case of the Elk River facility, the AEC/DOE required the complete demolition of the facility. The NRC requires only that residual radioactivity be removed to levels acceptable for release of the facility to unrestricted access. Non-radioactive structures may remain on site.

4 RESPONSIBILITIES OF THE PROJECT MANAGER OF A NONPOWER REACTOR

This section of the handbook, dealing with nonpower reactors (research reactors, test reactors, and critical facilities), is included because both the Atomic Energy Act of 1954, as amended, and the NRC regulations single out these facilities and treat them differently from power reactors.

In practice, many of the regulations either explicitly or implicitly exclude research reactors, and some parts (or subparts) of the regulations apply uniquely to research reactors and critical facilities. However, test reactors are generally treated in the regulations in the same way as power reactors. Because there is no separate listing of these parts of the regulations and there is nothing resembling a complete set of regulations applicable only to these nonpower reactor facilities, this section of the handbook presents current practice at NRC for handling license actions for such facilities. This is based primarily on the applicable regulations, but also on past interpretations of the regulations.

Nonpower reactors operate at much lower power levels than power reactors, have a much smaller inventory of fission products in the fuel, generally operate at low temperatures and pressures, and therefore present a much lower potential radiological risk to the environment and the public. Furthermore, there are many variations in reactor types and fuel types, and large ranges both in authorized power levels and in operating schedules.

Therefore, even though certain license-related questions can be resolved in a generic way for groups of research reactors with similar characteristics, each facility must be considered on the basis of its design, construction, site, use, and operating parameters.

Although new applications for construction permits (CPs) or operating licenses (OLs) are possible in the future, the principal licensing actions anticipated will be concerned with the currently licensed operating reactors. These actions will involve license amendments of various types, including license renewals. In fact, most of the operating licensed research reactors which received their licenses for a period of 20 years during the 1950s and 1960s have been, or will be, renewed in the 1980s.

The present NRC position is that the renewal of an OL, although implemented as an amendment, is a reissuance of the license. Therefore, technical review of the facility comparable to that performed at the time of the original CP and OL stages should be performed. Among other things, this review should consider the possibility that regulations and acceptable practices might have changed since initial licensing, that the likelihood or magnitude of radiological risk to the public or the environment might have increased as the age of the reactor increased, or that the use of the reactor has changed significantly.

Because license renewal is similar, both technically and administratively, to initial licensing of a research reactor, the following sections treat licensing

first and in some detail, discuss operating license amendment actions other than renewals, and then discuss renewals and major differences from original licensing.

Both because of the wide diversity of types of nonpower reactors and because the applicable regulations are not all encompassing, guidance to applicants has not been uniform concerning the acceptable content and format for safety analysis reports (SARs), requests for amendments, technical specifications, and other documentation. Specifically, the standard review plan for power reactors is not applicable to nonpower reactors either for initial licensing or for license renewals. On the other hand, a sound written record on which to base the licensing action is necessary. To improve the guidance situation, NRC has developed a series of regulatory guides (division 2) applicable to research reactors. The American Nuclear Society (ANS) has also established various standards committees that develop consensus standards for guidance. Because NRC maintains active participation and a review and balloting role on the ANS standards committees, it is expected that project managers (PMs) will use the approved standards when applicable. In several instances, an NRC regulatory guide will endorse an American National Standards Institute (ANSI)/ANS standard.

Even though there are some technical differences in the details, the review and licensing of nonpower reactors follow generally the same procedures as those for power reactors. There are, however, several distinctions that directly affect the licensing process. Following the definition given in 10 CFR 50.2, a "testing facility" means a nuclear reactor of a type described in 10 CFR 50.21(c) and for which an application has been filed for a license authorizing operation at

- (1) a thermal power level in excess of 10 MW or
- (2) a thermal power level in excess of 1 MW, if the reactor is to contain
 - (a) a circulating loop through the core in which the applicant proposes to conduct fuel experiments, or
 - (b) a liquid fuel loading, or
 - (c) an experimental facility in the core in excess of 16 square inches in cross-section.

The reference to 10 CFR 50.21(c) in the definition is to further define a reactor used primarily in research and development activities (class 104 license) and excludes one used primarily for industrial or commercial purposes (class 103 license).

The chief thrust of the above definition from a licensing standpoint is that, according to 10 CFR 50.58, an application for a reactor qualifying as a testing facility must be referred to the Advisory Committee on Reactor Safeguards (ACRS) for review, and at that point the licensing process becomes virtually identical to that for a power reactor case.

10 CFR 50.2 references a reactor "of a type described in Section 50.21(c)" of the regulations. As mentioned previously, this section of the handbook concerns reactors used in research and development activities. Even though a reactor might be of a power level and design that would normally qualify it as a research reactor, the manner in which it is used may cause it to fall under 10 CFR 50.22 of the regulations, which is concerned with reactors used for industrial or commercial purposes. For example, a university reactor used primarily for the production and sale of radioisotopes other than for use in research and development would be considered a commercial reactor and therefore would be licensed under 10 CFR 50.22. Thus, 10 CFR 50.58 would require that the application be referred to the ACRS for review.

At this point, the regulations are unclear about the process for licensing a commercial research reactor. Until now, no testing or research reactor has been licensed as a commercial facility. However, a research reactor used for commercial purposes might possibly require review to determine its status under antitrust law provisions. The Office of the General Counsel (OGC) should be contacted for guidance if this question arises.

Originally, the regulations provided no clear guidance for determining whether or not a research type of reactor was being used for industrial or commercial purposes. However, in a change to the regulations made in May 1973, 10 CFR 50.22 was modified to state that

In the case of a production or utilization facility which is useful in the conduct of research and development activities...such facility is deemed to be for industrial purposes if the facility is to be used so that more than 50 percent of the annual cost of owning and operating the facility is devoted to the production of materials, products, or energy for sale or commercial distribution, or to the sale of services, other than for research and development or education or training.

Therefore, an applicant for a noncommercial, research reactor license must initially provide information on the annual cost of owning and operating the facility, and an appropriate finding relative to industrial or commercial use must be made by the staff in issuing the construction permit. Note that Section 31 of the Atomic Energy Act of 1954 defines research and development in very broad terms.

It should be noted that the regulations do not distinguish between research reactor facilities and critical facilities. Although a critical facility will generally operate at much lower power levels and with greater experimental flexibility than a research reactor, the licensing process is the same. In terms of the regulations, both types are research reactors because they can both attain a condition of criticality. Any differences in safety considerations would be handled routinely by the PM in the safety evaluation report for the facility. Similarly, any differences in environmental consideration would be handled by the PM in his/her environmental review. Both a CP and an OL must be obtained for such facilities, pursuant to 10 CFR 50.10.

4.1 Construction Permit

10 CFR 2.101(a)(2) implicitly requires that notices of receipt of applications for CPs and OLs for research reactors be published in the Federal Register, because it makes no distinction among reactor types.

The licensing process for a testing reactor is essentially the same as for a power reactor. The application must be referred to the ACRS for review, and a public hearing must be held before the CP can be issued. The regulations do not require that the applications for research reactors be sent to the ACRS, although the application may be referred to the ACRS at the discretion of the staff. A public hearing is not explicitly required by the regulations for CPs for research reactors, but opportunity for a hearing would be provided by the notice in the Federal Register. Thus, a hearing may be held at the discretion of the Commission or if interested parties are permitted to intervene in the matter. If a public hearing were to be held, the same procedures would be followed as for a power reactor.

10 CFR 2.101(a)(2) also makes no distinction between research reactors and other facilities with regard to the requirement of an acceptance review of the application before docketing. Consequently, a predocketing review of the application for completeness and conformance with regulations is required for research reactors as well as for power and testing reactors.

At the CP stage in the licensing of research reactors, several important distinctions from power reactor cases arise. The first is the matter of an environmental statement (ES) for the facility. Research reactors are not among those facilities explicitly listed in 10 CFR 51.20(b) for which an ES must be prepared. NRR has, however, prepared a generic environmental impact appraisal (EIA) concerning general environmental effects of research reactors up to and including 2 Mwt. The PM should evaluate the environmental effect of the proposed facility and prepare an EIA and negative declaration (ND). If the environmental evaluation demonstrates that the generic environmental appraisal is applicable, the generic appraisal can be relied upon.

Although the construction and operation of a research reactor may have a small effect on the environment, any questions bearing on the environment would likely be reviewed and treated in the EIA and ND for the facility without the issuance of a separate ES.

A second consideration is the amount of construction work the applicant may undertake before issuance of the CP. Although NRC regulations require an applicant to get NRC approval before performing any work such as site preparation until the CP has been issued, greater latitude is permitted for research reactors. For example, a university seeking a CP for a research reactor to be housed in a building intended for additional use (such as a college laboratory building) is permitted by 10 CFR 50.10 to construct the building before the CP has been issued. In such a case, of course, the applicant may wish to design the building "around the reactor" but should be made aware that construction of the building does not preclude subsequent denial of the CP for the reactor.

In general, issuance of a CP does not permit loading of fuel into the core structure because a sufficient loading of fuel could allow the reactor to

achieve criticality and this would require prior authorization by an OL. However, in certain instances research reactor applicants have been authorized to insert fuel-bearing components into the core structure during the construction phase of the facility. Such components have included control rods with fueled follower sections, fuel elements containing thermocouples, and fission chambers. The insertion of such components before issuance of an OL must be determined by the PM to meet the following criteria as a minimum:

- (1) The amount of fissionable material involved must be well below the amount required to achieve criticality.
- (2) The purpose of the loading is to perform testing on the nonfueled aspects of the component, such as to determine proper alignment of a control rod or to fix the length of the lead wires from a fuel element thermocouple.
- (3) There will be no testing to determine the nuclear characteristics of the fuel in the particular component involved.
- (4) There must be no unacceptable environmental impact.

When these criteria have been met, specific authorization can be given in the CP to insert the components before the OL is issued.

In accordance with 10 CFR 2.105(a)(1), notice of intent to issue a CP for a research reactor must be published in the Federal Register. At this point, an additional useful step may be taken that is not generally practicable for power reactors. This is the so-called joint notice. A joint notice basically states the following:

- (1) It is the Commission's intent to issue a CP for the subject facility, and interested parties have a 30-day period in which to request leave to intervene.
- (2) When construction of the facility is completed in accordance with the application, the Commission intends to issue an OL without further public notice.

This type of action, which can appreciably shorten the licensing process, hinges on one main point: In order to issue the joint notice, the PM must determine that, at the time of issuance, all the significant information required to issue the OL is available and has been evaluated. This means, for example, that there are no major research and development items to be resolved during the construction phase. Technical specifications for the facility should be in their final form. Minor changes in design may be made during the construction phase, but at the end of the construction phase, the regional inspectors must find that the facility has been constructed substantially as described in the application.

The process of review and issuance of a joint notice (CP-OL) is summarized in Table 4.1. Note that 10 CFR 2.106(a)(1) requires post-noticing of these actions that have been pre-noticed.

NRC regulations require the staff to make detailed findings at the CP stage with respect to the health and safety aspects of the reactor. This requires

Table 4.1 The process of review and issuance of CPs and OLs for test or research reactors

Step	Task description
1	A complete application is received. The proposed technical specifications are included.
2	A notice is placed in the <u>Federal Register</u> that announces the receipt of an application for a CP (10 CFR 2.101(a)(2)).
3	A technical assistance request is formulated.
4	The appropriate review branches or a contractor review the application.
5	PM coordinates an environmental review and prepares an EIA, and then the ES or ND, whichever is appropriate.
6	A joint notice is placed in the <u>Federal Register</u> stating that a CP will be issued if there is no public intervention within 30 days, and that following completion of the facility, an OL will be issued.
7	An SER and technical specifications are prepared.
8	A determination is made whether the matter is to be referred to the ACRS; if not, program steps 17, 18, and 19 are completed ¹ , provided that the public has not intervened.
9	If the matter is referred to the ACRS or subsequently to a subcommittee, the PM usually presents the staff position. Coordination with technical reviewers is indicated if technical assistance is required for the ACRS presentation.
10	After the ACRS meeting, the ACRS makes its recommendations known by sending a letter to the Commission.
11	A supplement to the SER is prepared.
12	If a request to intervene has not been received, program steps 17, 18, and 19 are completed. If a request has been received, plans are made to conduct public hearings. ²
13	Coordination with the OGC is pursued to prepare testimony.
14	Public hearings are scheduled and subsequently held.

¹A CP for a test facility (power in excess of 10 MWt or with circulating loop experiments) must be referred to the ACRS. Research reactors may be referred at the discretion of the staff.

²Public hearings are mandatory on CPs for test reactors (10 CFR 50.58).

Table 4.1 (Continued)

Step	Task description
15	Findings of fact and conclusions of law are prepared by OGC. The Atomic Safety and Licensing Board issues an initial decision after completion of the hearings.
16	<p>A license package is assembled that contains the following:</p> <ul style="list-style-type: none"> (1) a letter to the licensee (2) the SER and technical specifications (3) a copy of the notice to be published in the <u>Federal Register</u> (4) the CP (5) the ES or ND and EIA or finding
17	Concurrence is sought from management, OGC, and technical reviewer (if appropriate). If concurrence fails, the license package may have to be revised.
18	After concurrence, the package is transmitted to the licensee and the notice is published in the <u>Federal Register</u> .
19	Once the facility is complete, the regional office inspects it and reports on the results to verify that the facility has been constructed in accordance with the application.
20	The SER, the NRR inspection report, and any amendments to the CP are reviewed.
21	<p>A license package is assembled that contains the following:</p> <ul style="list-style-type: none"> (1) a letter to the licensee (2) the OL (3) a copy of the notice to be published in the <u>Federal Register</u> (4) environmental impact evaluation (5) emergency plan (6) physical security plan (7) operator qualifications plan
22	Concurrence is sought from management, OGC, and technical reviewer (if appropriate). If concurrence fails, the license package may have to be revised.
23	After concurrence, the package is transmitted to the licensee and the notice is published in the <u>Federal Register</u> .

in-depth safety and environmental evaluations, an SER (10 CFR 50.40 and 50.41), and an EIA as a minimum. The SER for the CP need be related only to design and construction. However, it may also cover operations. Certain kinds of plans, such as physical security, emergency, and operator requalification, must be submitted by research reactor applicants, but the requirements are scaled down considerably from the requirements for power reactors.

4.2 Operating License

The issuance of an operating license for a research reactor follows the same procedure as for any reactor except, as mentioned before, it is possible to issue it without a separate prior public notice if the joint notice procedure has been followed. In either case, if substantial changes in the facility design have not been made during construction, and if the CP findings and associated safety evaluation conclusions have adequately addressed operations also, these may be merely reiterated for the notice of issuance of the OL, without repeating the details included in the CP SER.

4.3 Safety Evaluation

The safety evaluation for a research reactor should follow as closely as possible the format of safety evaluations for power reactors. A modified format was adopted for research reactors in the 1981-1982 period. The following specific items require special attention:

The Site

Research reactors generally do not have the large exclusion areas customary for power reactors and occasionally are located in highly populated urban areas. The unrestricted area normally begins where the reactor building ends but can sometimes include areas within the reactor building, as in university laboratory buildings.

The Building

A research reactor building usually has no containment comparable to a power reactor, has a short or no ventilation stack, and may, within its own confines, contain unrestricted areas. Therefore, in many cases, establishing the bases for radiation dose calculations is more difficult than for power reactors.

Routine Releases

Because of their possible proximity to inhabited areas, research reactors are usually not permitted to release fission products to the atmosphere routinely. Furthermore, if fission products escape from the fuel cladding, such a fuel element is defined in technical specifications as "damaged," and must be replaced in order to continue operations. Small amounts of airborne radioactive effluent, however, may be released, generally in the form of non-fission-product gases such as argon-41 and nitrogen-16 resulting from the neutron irradiation of air and/or water. Such releases are governed by the provisions of 10 CFR 20 for unrestricted areas. An American National Standards Institute (ANSI) standard, "Radiological Control at Research Reactors," has been prepared and may prove helpful to the PM in his review (ANSI/ANS 15.11).

Accidental Releases

Accidental releases of radioactive materials to the environs of a research reactor could occur as the result of the failure of one or more fuel elements or of failure of an experiment in the reactor. Such accidents are usually considered in the safety evaluation at the CP stage. The guideline doses for siting purposes given in 10 CFR 100 do not apply to research reactors. However, 10 CFR 100 is applicable to test reactors. Furthermore, the doses permitted under 10 CFR 20 for normal operations should not be used as criteria because they may be overly restrictive for accident situations. Both of these premises have been upheld by the ASLAB in the Columbia University reactor proceedings. ANSI has issued an industry standard on siting criteria for research reactors (ANSI/ANS 15.7), which may be helpful for the PM in making an ad hoc determination in each case. In any event, the radiation doses deemed acceptable should be well within the guidelines of 10 CFR 100.

Design-Basis Accident

For power reactors, various design-basis accidents are postulated to assess the design acceptability of different systems. For research reactors, a single design-basis accident or event is usually postulated for the purpose of judging the likelihood and the severity of an accidental fission-product release. In the past, a range of credible accidents was postulated by the applicant and the most severe, termed "maximum credible accident," was chosen for detailed review. In the light of recent ASLAB decisions, an acceptable method for establishing the design-basis accident is to establish a range of credible events and then postulate an accident somewhat more severe than any considered credible. In certain types of reactors, the postulated accident may not lead to the release of fission products from the fuel. In any case, for research reactors, a postulated failure of an experiment must also be considered because it could lead to consequences more severe than a failure of reactor systems or components. Such an event is better referred to as a maximum hypothetical accident because it is neither directly related to facility design nor considered to be credible.

4.4 Environmental Evaluation

The National Environmental Policy Act of 1969 (NEPA), Section 102(c), requires all agencies of the Federal Government to prepare detailed environmental statements for "major Federal actions significantly affecting the quality of the human environment...." Licensing and other regulatory actions involving research reactors are Federal actions that may fall under the act if the consequences of such actions significantly affect the quality of the human environment.

For testing reactors, 10 CFR 51.20(b) requires preparation of an environmental impact statement (EIS or ES) before a CP or an OL is issued regardless of the magnitude or type of expected environmental impact. The applicant must provide the basic input on which the EIS is based.

For licensing and associated regulatory actions for research reactors, 10 CFR 51.20(b)(13) and 51.21 require that a determination must be made concerning whether or not the action would significantly affect the human environment. If so, an ES would be required. If not, and with certain exceptions, a negative declaration (ND) and supporting environmental impact appraisal (EIA) would be required.

According to 10 CFR 51.20(b), an ES is not explicitly required by regulation for licensing a research reactor.

For the purposes of NEPA, a major Federal action relating to research reactors is any action that affects the construction or operation of the facility including, but not limited to, actions to obtain

- (1) construction permits (for new or supplemental construction)
- (2) operating licenses
- (3) amendments to construction permits and/or operating licenses
 - (a) extension or terminations (including partial or total dismantling of the reactor) of permits or licenses
 - (b) increases in authorized power levels
 - (c) technical specification changes

For the above actions, the need for an ES must be determined. An ES will be required if the action results in the quality of the environment being affected in a significant manner. Because of the nature of research reactors, licensing actions for these facilities usually do not require preparation of an ES unless major construction or modification is involved. If an ES is required, it will be prepared in the same manner as other environmental reviews, as provided for in 10 CFR 51.

NRR has a generic EIA concerning the effects of research reactors authorized to operate at steady-state power levels up to and including 2 Mwt. This EIA could form the basis for deciding whether an EIS is required for a particular reactor under review. However, the specific reactor must operate in the relevant power range, have no special features, and be generally similar to the reactors considered in the generic EIA. Furthermore, this generic EIA does not constitute an EIA for the reactor under review; instead, a separate EIA must be prepared that may show and conclude that there are no special considerations to preclude reliance on the generic EIA.

If it is determined that an ES is to be issued, there are certain actions required by 40 CFR 1500-1508 concerning scoping - that is, what will be covered in the document and in what detail. The scoping process normally leads to a scoping meeting, open to members of the public, that aims to determine the scope of the ES and to identify the significant issues involved. This process is undertaken with the intent of ensuring that the review leads to an adequate environmental analysis, including all reasonable alternatives and mitigation measures.

When it is determined that an ES is not required, it must further be determined whether an ND will be required.

- (1) An ND will be prepared for the licensing action if the action authorizes a significant change in effluent types or total amounts or an increase in power level, but the quality of the environment will not be affected in a significant manner. Although not necessarily meeting these guidelines for requiring an ND, it may be prudent to prepare NDs for actions that are of a sensitive nature, such as decommissioning.

The ND will be prepared before the associated regulatory action is taken and will state that the Commission has decided not to prepare an ES for the particular action and that an EIA setting forth the basis for that determination is available for public inspection. NDs will be published and made publicly available.

- (2) An ND will not be required if the results of the action (from the standpoint of environmental impact) are nonsubstantive and insignificant in nature, or do not involve changes in operation discussed in item 1 above.

If it is determined that an ND is not required, then this finding must be so stated in the SER or in the letter notifying the applicant of the licensing action.

An EIA is prepared in support of all NDs to document and provide the basis for the ND. The EIA will include

- (1) a description of the proposed action
- (2) a summary description of the probable impacts of the proposed action on the environment
- (3) the basis for the conclusion that no ES need be prepared

Initially, the PM must determine the environmental nature of the action as discussed above. If the PM has determined that an ES is not required, the PM must also determine if the action is such that an ND is required. The appropriate technical review branch should be consulted in cases of uncertainty. If an ND is not required, then the PM makes the appropriate statement in the letter advising the applicant of the action. If an ND is required, the PM prepares an ND and a supporting EIA. These cases should be identified at the earliest possible time so that the ND and EIA do not hold up the licensing action.

The applicant should provide, as part of the application, appropriate documentation outlining the nature of the licensing action requested and assessing any environmental consequences, including a description of the facility, its surrounding environs, how the action requested will affect the quality of the human environment, and a listing of any effluents and other waste streams, waste storage facilities, and so forth, together with an evaluation of these items as far as expected environmental consequences are concerned. This information should provide the basis for the EIA and substantiate the ND, but should be supplemented, if necessary, by an appropriate request to the applicant.

4.5 Technical Specifications

Technical specifications for research reactors follow the same general format as for power reactors. However, there exists a "Standard for the Development of Technical Specifications for Research Reactors" (ANS 15.1) that NRC helped to develop and has committed to use as a standard guide for those aspects of operation specific to research reactors. Moreover, Regulatory Guide 2.2, "Development of Technical Specifications for Experiments in Research Reactors," November 1973, may be used for evaluating proposed experimental programs and

establishing appropriate technical specification limits for research reactors. Additional division 2 (research and test reactors) regulatory guides that may be of value in establishing technical specifications are "Operation of Fast Pulse Reactors" and "Performance of Critical Experiments."

Technical specifications of research reactors are generally changed in the same way as for power reactors. One exception is that no notice appears in the Federal Register for license amendments that do not involve a significant-hazards consideration.

4.6 License Amendments

License amendment procedures for research reactors are generally similar to such procedures for power reactors. Applications for amendments must be filed with the Commission in accordance with 10 CFR 50.90. If the amendment involves a significant-hazards consideration, prenotice of a proposed amendment to a research reactor license must be published in the Federal Register, in accordance with 10 CFR 2.105(a)(3) and 50.91. If the proposed amendment for research reactors does not involve a significant-hazards consideration and has not been prenoticed, the SER must contain a statement that no significant-hazards considerations are involved and must state the specific bases for that determination.

In accordance with 10 CFR 2.106(a)(1), notice of the issuance of an amendment must be published in the Federal Register if the proposed amendment was pre-noticed. If the proposed amendment was not prenoticed, postnoticing of the issuance is not necessary. On the basis of 10 CFR 2.106(a)(2), this postnotice requirement for research reactors differs from that for power and testing reactors. Testing reactor amendments must be prenoticed.

4.6.1 Safety and Environmental Considerations

For all license amendments having a potential impact on health and safety, an SER is required for research reactors as well as power reactors. The SER must describe the proposed change, evaluate the basis and consequences of the change, and support and justify any special conditions and the conclusions.

If it is determined that the amendment to the research reactor license does not constitute a major Federal action significantly affecting the quality of the human environment, the SER should contain a standard statement, with bases, that an EIS, EIA, and ND are not required.

4.6.2 Power Level Increase

The regulations do not explicitly require either an EIS or EIA for a license amendment increasing the operating power level of a research reactor. Neither do the regulations limit the maximum power level nor maximum increase in power level for research reactors, until the level of a testing reactor facility is reached (10 CFR 50.2). Because an increase in power level could change significantly the environmental impact previously evaluated, OGC recommends that an EIA be prepared for power increase amendments for research reactors.

4.7 License Renewals

The Atomic Energy Act of 1954 does not specify a limit on the period for which a class 104 license can be issued. Nevertheless, 10 CFR 50.51 requires that all licenses be issued for fixed periods of duration, not to exceed 40 years. Thus, for nonpower reactors, both CPs and OLs must be issued for specific periods of time. This means that eventually all OLs for nonpower reactors will be candidates for renewal or for other action, such as decommissioning. The current NRC position is that renewal of a research reactor OL is equivalent to reissuance of the license. As such, prenotice of the proposed reissuance is required by 10 CFR 2.105(a)(1), regardless of any determination of whether the proposed action involves a significant hazards consideration. Furthermore, according to 10 CFR 2.106(a)(1), postnoticing will be required on issuance of the renewed license. The prenotice provides the opportunity for public intervention in the renewal action. An operating license for a nonpower reactor is renewed as an amendment to the current license.

4.7.1 Timely Filing and Information Required

10 CFR 2.109 provides that if a licensee applies for renewal at least 30 days before the existing license expires, it will be deemed to remain valid until the application is acted upon by the NRC.

Because the action applied for is "reissuance" of an OL, the application should comply with the same general standards and criteria as an application for a new facility. Therefore, the licensee should update and resubmit the information required by 10 CFR 50.33 and 50.34. This may be presented as a complete resubmittal or may be done by incorporating previously filed applications and amendments by reference, according to 10 CFR 50.32.

4.7.2 Safety and Environmental Considerations

The safety review performed for a license renewal will be equivalent to that performed for initial licensing. This is necessary for evaluating whether the facility continues to meet all regulatory requirements, for determining if safety problems have resulted from years of operations, and for making appropriate environmental evaluations now, perhaps some 20 years after the initial licensing review. However, unless significant changes in operating parameters are also involved in the license renewal, it is likely that no new impact on the environment will be involved. Operating experience provides important input for both safety and environmental considerations.

As mentioned earlier, the current NRC practice is to perform these technical reviews and to issue an SER that is similar in form to an SER for a power reactor but is commensurate with a power reactor's small potential risk to the public.

For a research reactor, an EIA should be prepared for a license renewal action. As in the case of other license amendments, an EIA associated with a license amendment that renews an OL may be based largely on the generic EIA if applicable.

4.8 Review of Government-Owned and Government-Operated Nuclear Facilities

Reactor facilities owned and operated by agencies of the Federal Government, primarily the U.S. Department of Energy (DOE) and Department of Defense (DOD), are generally not licensed by NRC. However, if asked, NRC provides advice and comment on the safety or environmental impact of new reactors, on major modifications to existing reactors, and on other unreviewed safety or environmental questions to the organization responsible for the facility. NRC is also responsible for referring special cases to the ACRS for review. It is normally interpreted that if the steady-state power level of the facility is 10 Mwt or greater, or if the facility has unique design features, the case must be referred to the ACRS. This is analogous to the practice established by regulation with respect to testing reactors licensed by NRC.

The primary role of the PM during the review of these facilities is to coordinate the efforts of the various technical review branches, if required, and to perform the overall safety and/or environmental review.

The results of the review and evaluation effort are assembled and integrated by the PM and form the bases for a letter and safety evaluation report that are transmitted to the responsible agency. The majority of questions and problems can be resolved by meeting with the Government groups asking assistance and their contractors. The PM arranges these meetings through the agency and issues a meeting notice containing the agenda to the responsible Government agency and to all NRC personnel participating in the review.

If the information provided at the meeting is important to the resolution of significant issues, the information should be provided in writing to the staff. Those issues not resolved by the time a staff letter and SER are prepared for transmittal to the requesting agency shall be included as unresolved safety issues or unresolved environmental issues. An attempt should be made to resolve as many issues as the time allowed for the review will permit. If possible, the PM will propose solutions to these unresolved safety issues that are acceptable to the staff. Unlike safety reviews performed for licensing action, the review of Government reactors requires only NRC staff comments and recommendations, not approval. It should be recognized, however, that the comments and recommendations, if related to significant safety or environmental concerns, may have nearly the same impact as approval or disapproval.

The schedule under which the review is performed usually is controlled by the program needs of the requesting Government group and not by the review needs of the NRC staff. Therefore, the period of time over which the review is performed may be minimal (sometimes less than 60 days), and the depth of the safety review will be, accordingly, less than in most licensing reviews. Any delay in the program requirements may be absorbed by the staff and some delays may be possible if significant safety issues are found during the NRC staff review.

When the review has been completed and all safety issues have been resolved or identified to the satisfaction of the NRC staff, the PM prepares an SER that may be a separate document or may be included in the memorandum to the Government agency responsible for the facility. The cover letter (memorandum) will

provide a summary of the comments and recommendations and should briefly describe the extent of the review. Because the review is usually limited to those safety or environmental aspects requested by the Government group, the overall depth and extent of the safety review is not intended to be completely comprehensive. If all safety and environmental issues have not been resolved to the satisfaction of the NRC staff, positions on these issues should be developed and discussed with NRC management for resolution of the position to be presented in the cover letter and SER. The PM arranges that a cover letter and SER are prepared and include the comments and recommendations presenting the NRC position to the Government agency. Upon completion of the review, the project is completed. The operating safety of the facility is not followed by the regional office or NRR as is required for a licensed facility, but is the responsibility of the Government group that requested assistance from the NRC.

4.9 Conversions From Highly Enriched Uranium to Low-Enriched Uranium

Since March 27, 1986, the Commission no longer issues CPs for nonpower reactors if the applicant proposes to use highly enriched uranium (HEU) fuel (10 CFR 50.64). HEU fuel has a weight percent of U-235 in the uranium of 20% or more. Target material, special instrumentation, or experimental devices that use HEU are not included in the definition of HEU. Also, existing nonpower reactors will not initiate acquisition of additional HEU fuel if low-enriched uranium (LEU) fuel acceptable to the Commission is available. Reactors currently using HEU fuel must make plans to convert to LEU fuel.

If the applicant demonstrates and the Commission determines that a proposed or existing nonpower reactor has a unique purpose, it may be fueled with HEU fuel with enrichment as close to 20% that meets the unique purpose and is available and acceptable to the Commission. "Unique" purpose means a project, program, or commercial activity that cannot reasonably take place without the use of HEU fuel. Some examples of unique purposes may be found in 10 CFR 50.2.

Conversion to LEU is dependent upon Federal Government funding. This funding covers the costs of the development of new fuel types, the cost of preparing the necessary safety analysis, and the cost of the new fuel itself. This feature of the regulation recognizes the fact that most nonpower reactors are operated by groups that would not be able to pay the cost of conversion without outside funding. Also, conversion is in the interest of the United States because the amount of HEU in circulation is reduced. On March 27, 1987, licensees using HEU were required to submit either a schedule of their conversion plans or certification that Federal Government funding for their conversion was not available. Licensees without funding must resubmit such a schedule or certification each March 27 until funding becomes available.

The conversion proposal shall include, to the extent required to effect the conversion, all necessary changes to the license, facility, and procedures. The changes must be supported by a safety analysis. After review of the material, NRR will issue an enforcement order directing the conversion and required changes in the license, facility, or procedures.

This is a logical time for licensees to submit other license actions such as an increase in power. Although other changes may be submitted at the same time as the conversion proposal, such submittals are considered separate actions and follow the regulatory process appropriate for the application.

5 RESPONSIBILITIES COMMON TO ALL PROJECT MANAGERS

Section 2 of this handbook describes the responsibilities of the licensing project manager (LPM), in general, and pays detailed attention to those project managers (PMs) assigned to licensing reviews. Section 3 describes the responsibilities of the operating reactors project manager (ORPM). Section 4 describes the responsibilities of the PM for research reactors and nonpower reactors. This chapter describes the responsibilities common to all three types of PMs.

5.1 Development of New NRC Positions

During the review and evaluation of various submittals, it is not unusual for the PM to encounter a new technical issue that requires the development of a staff position. The PM and associated review personnel should initially determine the extent to which the issue affects other proposed and licensed facilities. An issue that is peculiar to a single facility and with limited impact can most likely be resolved among the PM, associated review personnel, and their respective branch chiefs. Other issues of greater impact, including those that might have generic implications, may require decisions at higher levels of management and review by the Committee To Review Generic Requirements (CRGR).

The PM's responsibilities in the development of new positions are:

- (1) Recognize that an issue is new and needs a staff position.
- (2) Pursue the development of a position with appropriate assistance from the technical specialists (assuming the issue is not of the complex variety requiring task force action).
- (3) Keep the project director apprised of the status of the issue so that higher levels of management may be kept informed.
- (4) Appropriately document the issue under review and its resolution.

If a new position is developed that represents a major increase or decrease in safety requirements or scope of review for any standard review plan (SRP) section, a change to the SRP should be initiated. Before final approval, an SRP revision and an associated value-impact statement will be published as a "Proposed Revision to the Standard Review Plan" for public comment. The comment period permits the public to participate in the decisionmaking process before the SRP section has been approved and issued in final form and encourages public input to the content of new requirements and to the value-impact statement associated with each new or revised section of the SRP. The Inspection, Licensing and Research Integration Branch is responsible for maintaining the SRP. For further information, see NRR Office Letter No. 800.

5.2 Development of Regulations and Regulatory Guides

The development of regulations that identify and define requirements imposed on applicants and nuclear facilities and regulatory guides that identify and define acceptable solutions to safety concerns are the responsibility of the Office of Nuclear Regulatory Research (RES). However, to best obtain the benefit of experience gained through the review and evaluation process and through the operation of nuclear facilities, assistance in the development of these regulations and guides is usually requested from the Office of Nuclear Reactor Regulation (NRR). Specifically, PMs may be assigned the task of reviewing and commenting on draft regulations and guides prepared by RES.

5.3 Development of Standards

A major effort in the development of standards and codes that provide guidance in many areas for the design, fabrication, construction, installation, and operation of a nuclear facility is undertaken by the various technical societies supported by both industry and government. The NRC has one or more persons on many of the committees established to develop standards. These individuals are usually personnel from the RES, but some NRR specialists also participate. In some cases, PMs may be assigned to assist in the development of standards. Members of these standards committees serve as individuals and cannot make commitments for the NRC; however, their contributions must reflect the NRC positions.

As draft standards are prepared by the technical committees, they are submitted to the NRC for review and comment. PMs may be assigned to assist RES in this review in the same manner as that described previously for regulations and guides.

5.4 Specific Technical Tasks

Other divisions and offices have prime responsibility for the review and evaluation of technical matters involved in the licensing process. However, on occasion, a PM, assisted by other PMs if necessary, may be called on to perform the review and evaluation effort in a particular technical area. Such a situation could occur because of a temporary work overload in a technical review area. In this event, prior agreement must be obtained between the PM's division and the organization normally responsible for the review. It is the responsibility of the PM to alert management to any impending situation of this sort so that a timely decision can be made and appropriate action can be initiated.

5.5 Ad Hoc Committees and Task Forces

One of management's techniques for performing a study or resolving a safety problem in an efficient and expeditious manner is to establish a committee or task force, composed of members from the affected NRC groups, given a charter to perform the assigned task. PMs can be assigned to such ad hoc groups, usually for a preplanned period, on either a full-time or part-time basis.

5.6 Special Licensing Evaluations

Occasionally, PMs are called on to perform special licensing evaluations that are not normally a part of the review and evaluation process for a construction

permit (CP) or an operating license (OL), or are in the nature of a preapplication review. An example is a preapplication review of an advanced reactor concept. These types of special evaluations are generally assigned to a PM who is assisted by personnel from review branches as necessary.

5.7 Principal Correspondence and Public Relations

Nonroutine communications received by NRC from external sources fall into the category of principal correspondence. These include communications from congressional sources, heads of Government agencies, State and local officials, the general public, foreign officials, and various industrial and civic organizations. For further description of principal correspondence and its handling, see NRR Office Letter No. 103.

Occasionally, it is necessary that a PM prepare the reply to principal correspondence because it relates directly to the project or because it involves technical considerations, generally of a broad nature, that are best handled by a PM.

In view of the NRC's responsibility for keeping the public well informed, PMs have to participate in public meetings on occasion, in connection with specific license applications. At such meetings, the PM may be required to describe the details of the license review process, emphasizing technical and procedural aspects.

5.8 Liaison With Other Project Managers

In addition to seeking guidance from the project director and the assistant director, one of the principal techniques that a PM can employ to determine how a particular safety or environmental issue was resolved on another application is to contact other PMs who faced the same issue on another project. To increase the effectiveness and efficiency of PMs, extensive communication between PMs on common technical problems is encouraged. At times this may take the form of group discussion in which one or more of the PMs will relate experiences on a given new problem area. The dynamic nature of the review process and the constant evolution of reactor technology make all types of formal or informal liaison very important.

5.9 The Regulatory Information Tracking System (RITS)

The RITS is a computer system that summarizes the status of all actions inside NRR. It takes input from several subsystems.

The regulatory activities manpower system (RAMS) is a subsystem for recording time spent on specific activities. Each employee reviews a weekly, preprinted report to use in recording time for the week. It is important that time expenditures be reported conscientiously and accurately because information from this system forms the basis for regulatory fees, NRR budget justification, and manpower allocations within NRR.

The technical assignment control (TAC) system is a subsystem within the RITS. The TAC system is used primarily by PMs when review assistance is needed for a specific task to be performed by a technical review branch. More information on the PM's use of the TAC system is given in Section 3.5.2 of this handbook. The PM provides input to the TAC system by periodically submitting a marked-up "Project Manager Report" (PMR).

5.10 Contracts

NRR often uses program support funds to contract with national laboratories or other organizations to provide technical assistance to the NRR staff. Most of these funds are administered by the branches performing technical reviews, but a PM may be called upon to administer a contract.

5.11 Differing Professional Opinions

During the normal course of NRR work, differing professional opinions on how to handle a given technical issue may arise. NRR is an open body and it is important that such differing professional opinions be appropriately discussed and resolved. Procedures for handling differing professional opinions are given in NRR Office Letter No. 300.

5.12 Proprietary Data

In support of an application, applicants sometimes submit information that they request be withheld from public disclosure. Such requests are not always granted. A review must be conducted to determine whether the information is a trade secret or confidential or privileged commercial information and, if so, should be withheld. In most cases, the PM will conduct or coordinate this review. See Section 3.6.12 of this handbook for more details.

5.13 Utility Commitments

Applicants or licensees often make written commitments to NRC to identify specific actions they intend to take, usually in response to some NRC safety concern. Commitments of this type are not binding on the utility. To the extent that such commitments are judged to be a necessary element to support an acceptable finding, they should be clearly spelled out in the safety evaluation report (SER). It may be that such commitments also become license conditions in some cases. See Section 3.6.8 of this handbook for more information.

5.14 Abnormal Occurrences

Section 208 of the Energy Reorganization Act of 1974 requires the Commission to (1) provide abnormal occurrence event information to the public within 15 days after receiving information about such an occurrence and (2) submit to the Congress a quarterly report listing any abnormal occurrences that have occurred during that reporting period. As defined in Section 208, an abnormal occurrence is an unscheduled incident or event, at or associated with any facility licensed or otherwise regulated by the NRC, that the Commission determines is significant from the standpoint of public health and safety. Abnormal occurrence reports are often referred to NRR for review and evaluation.

5.15 10 CFR 21 Notifications

10 CFR 21, "Reports to the Commission Concerning Defects and Noncompliance," requires directors and responsible officers of firms and organizations building, operating, or owning NRC-licensed facilities or conducting NRC-licensed activities to report (1) defects in components (that could create a substantial safety hazard) and (2) failures to comply with regulatory requirements, that

also could create a substantial safety hazard. These notifications are usually sent to the regional office; however, they are sometimes transferred to NRR for review. The PM may be requested to initiate a licensing action.

NRR Office Letter No. 1300 provides additional guidance.

5.16 Requests To Modify, Suspend, or Revoke a License Under 10 CFR 2.206

10 CFR 2.206 states that any person may file a request for certain NRC officials, including the Director of NRR, to institute a proceeding to modify, suspend, or revoke a license or to take such other actions as may be proper. PMs are often called upon to handle such requests. Specific procedures for handling these requests may be found in NRR Office Letter No. 600. See also Section 3.6.7 of this handbook for more details.

5.17 Inspection Reports

The regional offices prepare reports that summarize the results of inspections performed by field personnel at the reactor facility site; at the offices of the applicant, nuclear steam supply system vendor, and architect-engineer; and at the facilities of various manufacturers and suppliers. During the CP review, the inspection reports are concerned primarily with the applicant's implementation of the quality assurance program and with the adherence by various manufacturers to requirements for long-lead items such as the reactor pressure vessel. During the post-CP phase and during the OL review, the inspection report covers substantially more areas of activity.

The PM should be actively involved with these inspection reports at least in the following ways:

- (1) If the report documents any violation, determine if appropriate licensing action, such as amendment to the license, should be initiated. A technical review branch may be consulted where appropriate.
- (2) Note the general "flavor" these reports communicate on various SALP functional areas (see Section 5.19). Such "flavor" should be compared with the PM's own first-hand experience gained during site visits. The accumulation of such impressions would help to enable the PM to participate actively in the SALP (systematic assessment of licensee performance) process.
- (3) Note if there are recurring problems at the plant, and determine if plant-specific or multiplant actions need be initiated. In either case, discussion with the project director and regional personnel is advisable.
- (4) If the PM disagrees with any aspect of the inspection report, he/she should discuss the disagreement with the regional section chief and the resident inspector, and take appropriate followup action.

5.18 Daily Highlights and Director's Highlights

A daily highlight or a director's highlight is an item of information of such significance that the Commission or NRR management should be alerted to it. The PM, being in constant contact with various persons at the assigned plant,

should have prompt and up-to-date information on events. The PM is responsible for determining when a highlight of either type will be written. Typical subject matters to be covered by highlights are listed below. The list is intended to be illustrative and not all inclusive. The philosophy is generally, "if in doubt, issue a daily highlight and/or a director's highlight."

- (1) exemptions and orders issued
- (2) major licensing actions, e.g., CP and OL issuance, authorization to increase power, or authorization to replace a major component
- (3) significant events related to a hearing, or that might lead to a hearing or a public meeting
- (4) component failure and/or operating problems that either cause a prolonged reduction in power capability or necessitate a plant shutdown
- (5) occurrences or issues that have the potential for becoming an abnormal occurrence or requiring a prompt resolution on a generic basis, or of significant public interest
- (6) conclusions regarding technical issues that have high visibility and interest, e.g., pipe cracks or qualification of electrical components
- (7) results of investigations of unusual occurrences
- (8) releases of chemicals or radioactive materials that significantly exceeded technical specification limits (e.g., extended duration or large quantity)
- (9) significant staff activities with other agencies that have broad interest or when conclusions are reached (e.g., Council on Environmental Quality)
- (10) meetings with all utilities or owner groups that have high visibility or significant impact on licensees
- (11) offsite events that may affect plant operation (e.g., chemical spill)

Each highlight should be as brief as possible but should to the extent possible describe (1) the occurrence (issue or action), (2) the significance, (3) the action(s) being taken to resolve the occurrence, and (4) conclusions reached. However, since the event may still be unfolding when the memorandum is being written, there may not be sufficient information available to address all four points. The PM must weigh between promptness in reporting the event and the ability to give a detailed, fully analyzed account. In general, it is better to be prompt than to wait for further details. This is because the event will eventually be addressed in detail, complete with technical analysis, in future reports such as the licensee event report, regional office inspection report, and NRR safety evaluation report.

Examples of the highlights abound. The PM should be able to obtain these from the licensing assistant and from the branch reading files. The branch secretary should also have the current format of either highlight on the IBM 5520.

5.19 Systematic Assessment of Licensee Performance

The objectives of the SALP program are to improve the NRC regulatory program by emphasizing resource allocation and improving licensee performance. The SALP program is an integrated NRC staff effort to collect available observations on an approximately annual basis, and evaluate licensee performance by considering those observations. Both the pluses and minuses of licensee performance are considered. Emphasis is placed upon understanding the reasons for the licensee's performance in important functional areas and sharing this understanding with the licensee.

The SALP process is oriented toward furthering NRC's understanding of the manner in which (1) licensee management directs, guides, and provides resources for ensuring plant safety and (2) such resources are used and applied. The integrated SALP program is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful guidance to licensee management.

Licensee performance is assessed by a SALP board set up by the regional office. The PM and his/her project director are official voting members of the SALP board. In these meetings, the PM participates in the discussions and provides opinions, as applicable, on all parts of the evaluation. Such meetings are held at NRC regional offices and at utility offices.

The SALP process, as well as the scope of NRR's role, are being constantly improved. NRR's contribution to the SALP report is dictated by NRR Office Letter No. 907. The Performance Evaluation Branch (PEB) will collect mini-SALP inputs prepared by various technical review branches when they complete a review. PEB will develop a draft input based on information received during the SALP period, and will provide the draft to the PM. The PM will then combine the PEB draft with his/her own assessment and prepare an NRR input to be transmitted to the region.

More detailed information on the PM's SALP duties may be found in NRC Manual Chapter 0516.

5.20 Licensing Boards

It is NRC policy that any new information which is material and relevant to licensing proceedings is provided promptly to appropriate licensing boards. The PM may play a key role in ensuring that any such issue or information is identified early and brought to management's attention immediately. NRR Office Letter No. 601 contains procedures for ensuring prompt and appropriate action on notifying licensing boards, the appeal panel, and the Commission of new information that the staff considers relevant and material to one or more licensing proceedings.

The referenced office letter obligates all NRR staff members to be alert to the significance of new information that is developed in the course of their reviews and to consider whether this information could reasonably be regarded as putting a new or different light on an issue before licensing boards, or as

raising a new issue after publication of the staff's principal evidentiary documents. This is the central theme of the procedures and requires the exercise of good judgment to ensure that licensing boards will not be burdened with material beyond that potentially significant to the individual licensing proceedings. Each PM should be familiar with the content of NRR Office Letter No. 601.

5.21 The Regions

NRR often receives requests from the regional offices for technical assistance. Examples of the type of assistance requested are:

- (1) The regional office may decide that a specific plant event, inspection finding, or licensee notification involves the need for a licensing action.
- (2) An event of the type just discussed may have short-term generic implications for other plants.
- (3) A regional office may need additional expertise or manpower in the exercise of its normal activities.

The requests for assistance will normally take the form of memoranda from the regions. A PM is usually assigned to manage the task.

The PM or the region should initiate a document called the task interface agreement (TIA). The TIA should contain a plan that outlines the actions to be taken and assigns specific actions to various NRR and regional organizational units. The principal function of the TIA is to ensure a clear understanding of which office is responsible for various elements of the NRC response, thereby avoiding duplication of effort. The TIA must be approved by the appropriate managers.

5.22 Allegations

The PM should be aware of the open allegations that affect his/her plant. Most allegations are handled by the regions; however, the PM may be assigned an allegation for which NRR has resolution and closeout responsibility. NRC Manual Chapter and Appendix 0517, "Management of Allegations," and NRR Office Letter Nos. 1000-1003 should be consulted for information. Also, additional guidance may be obtained by contacting the NRR Office Allegations Coordinator.

5.23 The Media

From time to time, a PM may be contacted by representatives of the media. The PM responding to media inquiries should feel free to provide any information that would normally be publicly available. If the PM does not know the answer to a question, or prefers not to talk with the media, the PM should refer the caller to more knowledgeable NRC staffers or personnel who handle public affairs.

See NRR Office Letter No. 108 for additional details. See also NRR Office Letter No. 106 regarding release of draft or predecisional documents.

6 PROJECT MANAGEMENT SUPPORT

The support available within the project directorates includes secretarial personnel and licensing assistants. In addition, the Program Management, Policy Development and Analysis staff, issues memoranda and office letters that provide instructions and guidance applicable to PMs. The Office of Administration provides support services in the areas of typing, proofreading, dictating, editing, publishing, reproduction (photocopying and printing), and issuing NRC manual chapters. The Office of Information Resources Management serves the PM with support in the areas of document control, information systems, library, and graphics.

6.1 Licensing Assistant

During the course of processing any document, a considerable number of administrative duties must be performed. So that PMs can work in a more effective manner, a licensing assistant (LA) is provided in each project directorate to handle most of these administrative duties.

The various duties for which the LA is responsible include:

- (1) Review applications for a facility license, or where appropriate, a CP or amendment thereof, to ensure that the nontechnical data and its format conform to applicable regulations and that the necessary information is provided.
- (2) Originate and process correspondence to Federal, State, and local officials on matters relating to safety, environmental, and antitrust reviews.
- (3) In some cases, assist PMs in monitoring project schedule status and initiating for the PM's approval necessary reports, correspondence, and corrective actions.
- (4) Maintain records of license amendment applications from the time notices are published until their final action (amendment, withdrawal, or denial). Maintain records of all orders, exemptions, code reliefs, and environmental documents issued by the project directorate.
- (5) Prepare construction permits (CPs), operating licenses (OLs), limited work authorizations (LWAs), and CP and OL amendments, incorporating input from technical and legal staff, and process these CPs, OLs, LWAs, and amendments until they are issued.
- (6) Assist in compiling technical staff testimony and consultants' reports for CP and OL hearings.
- (7) Prepare notices on safety, environmental, and antitrust aspects of the licensing actions, proposed or taken, for publication in the Federal Register or other appropriate written media.

- (8) Review safety evaluations, environmental assessments and environmental statements developed by the technical staff to determine that necessary procedural and organizational provisions and administrative requirements, conditions, and limitations have been incorporated.
- (9) Prepare routine replies to correspondence received from public and various organizations requesting status of projects.
- (10) Prepare chronologies for safety evaluation reports.
- (11) Prepare and maintain, in current status, service lists on all projects assigned, including State and local officials to be notified.
- (12) Ensure that correspondence issued by the directorate and major documents submitted by licensees/applicants are distributed properly.
- (13) Attend meetings with applicants/licensees to brief them on administrative procedures required by regulation for submittal of technical data.

In addition to duties associated with the processing of license applications, the LA serves as the administrative assistant for the directorate and performs the following duties:

- (1) Assist the project director in his/her administrative duties and coordinate branch clerical workload to meet established deadlines and priorities.
- (2) Assist in training all directorate personnel in administrative and management procedures and requirements.
- (3) In some cases, assist the project director in developing audit systems to ensure that administrative and management procedures are being implemented in the directorate.
- (4) Prepare replies to routine principal correspondence, as directed by the project director.
- (5) In some cases, serve as the primary assistant to the project director to coordinate requests received under the Freedom of Information Act and requests for proprietary handling of documents.

As a result of their active role in the correspondence activities, LAs are current on the administrative status of their assigned projects and can be relied on by the PM to ensure that all required steps are being taken in terms of the issuance of legal notices and notifications to appropriate parties at the proper times, and that regulations are being met in terms of both format and timeliness.

The result of the public hearing for a CP is an initial decision by the Atomic Safety and Licensing Board. The LA verifies that the certificate of service as prepared by the Office of the Secretary provides the initial decision to all parties concerned.

The same processes are repeated for the OL application, whether for full power or for a license conditioned to a lower power level. The PM should keep the LA informed about the pending status of the hearing and Commission approval action.

6.2 Office of Administration

The Office of Administration (ADM) has developed an NRC manual chapter system that provides for codification, issuance, control, and maintenance of certain internal operating policies and procedures pertaining to NRC activities. These operating policies and procedures are evolving continually and are issued as they are developed. The NRC manual chapter system sometimes is referred to as the NRC management directives system.

ADM provides services in the areas of word processing and the electronic distribution of documents; printing; space and property management and building services; technical writing, editing, and publishing; and general logistical support for the Nuclear Regulatory Commission.

ADM functions are carried out by a number of branches. Details of responsibilities of these branches may be found in NUREG-0325, "U.S. Nuclear Regulatory Commission Organization Charts." The PM constantly uses the services of two of these branches as is detailed in Sections 6.2.1 and 6.2.2 of this handbook.

6.2.1 Regulatory Publications Branch

The PM frequently uses the multiple services--editing, writing, word processing, text composition, publishing, and review of rules--provided by the sections of the Regulatory Publications Branch (RPB). This branch establishes editorial guidelines and publication policy and can assist the PM with the publications process from initial drafting through distribution of the final product.

6.2.1.1 Editorial Section

The PM frequently uses the editorial and writing services provided by the Editorial Section. Current NRR policy requires that all documents requiring the NRR director's signature be edited. In addition, the following documents shall also be edited: all NUREG-series reports such as SERs, SSERs, and technical reports; principal and Commission correspondence; bulletins; information notices; inspection reports; generic letters; and memoranda of understanding with other agencies. Experience has shown that the benefits gained from editing far exceed the extra time it takes to edit and process a document from the edited copy. To conserve the technical and editorial staff's review time, the PM should incorporate as many technical comments as possible before submitting a document for editing.

When a document is to be issued as a NUREG-series report, the PM should early in the development of the report seek publications and distribution guidance from the editorial staff.

6.2.1.2 Rules Review Section

Although most rules are developed by the Office of Nuclear Regulatory Research, the PM may occasionally be responsible for developing a rule. The PM should send a copy of the first draft of each rule to the Rules Review Section (RRS). RRS

staff reviews each rule for compliance with applicable statutes, agency policy, and Office of the Federal Register publication requirements. NRC policy requires that RRS concur with each rule submitted to the Office of the Federal Register for publication.

6.2.1.3 Technical Publications Section

The PM can request translation of a document and can learn whether a translation of a technical document already exists. The PM arranges publication and distribution of licensing and other NRC documents by contacting this branch.

6.2.1.4 Electronic Composition Services Section (Formerly CRESS)

The PM prepares a substantial number of documents during the course of the review and evaluation of an application. The Electronic Composition Services Section (ECS) was established to facilitate the word processing, revision, copy editing, proofreading, and composition of these documents.

The ECS uses a shared logic system to create, revise, print, store, and archive word-processed reports. Highly trained word processing specialists are able to take full advantage of this system for fast revision of reports. The system's ink-jet and laser printers produce the reports at high speed. The ECS has developed special procedures and quality control to provide the fastest turn-around time possible of quality reports. A contractor who uses compatible equipment maintains a manageable workload.

The ECS has an electronic publishing system which composes documents from final word-processed pages to two-column format with an assortment of type faces and sizes.

Data are communicated between the ECS and other NRC offices, regions, laboratories, and contractors. An optical character reader (OCR) is connected to the system for scanning typed material which is then available for printing or revision. Data are also converted to and from almost any type of word/data processing system and software.

6.2.2 Printing and Audiovisual Services Branch

The Printing and Audiovisual Services Branch (PAVS) performs a variety of functions, including printing, copying, audiovisual services, and photography.

Copying and Printing

Staffed facilities in various NRC buildings can provide copying and printing services. In addition, numerous self-service copiers are located throughout the NRC buildings.

Audiovisual

The Audiovisual Section provides service for video recording, duplication, and playback assistance; sound recording and duplication; an audiovisual library; and support and maintenance of audiovisual equipment.

Photography

The PM may arrange for local photography work (e.g., shooting and processing) with PAVS. This includes enlarging or reducing, as necessary, images onto film, slides, or paper.

PMs may consult PAVS for the professional preparation of presentation materials.

6.3 Office of Information Resources Management

One of the most important functions of IRM, as far as the PM is concerned, is the maintenance of the safety issues management system (SIMS). Maintaining SIMS requires that PM and reviewer reports be prepared periodically.

IRM provides central services in the areas of mail and messenger services; records services; distribution operations; records management; reports and forms management; telecommunications services; and library reference and research services.

Details of responsibilities of IRM branches may be found in NUREG-0325, "U.S. Nuclear Regulatory Commission Organization Charts." The PM constantly uses the services of several of these branches as is detailed in Sections 6.3.1 through 6.3.4 of this handbook.

6.3.1 Document Control Branch

The most prominent function of the Document Control Branch (DCB) is the administration of the nuclear document control system (NUDOCS). Through its contractor, Statistica, Inc., DCB ensures that formal NRC documents are placed on microfiche and are accessible through NUDOCS computer terminals.

PMs work with this branch by ensuring that all official documents are properly docketed. The PM can assume that a document coming from outside NRC, correctly addressed to "Document Control Desk," has been properly docketed. Sometimes, however, PMs receive original copies of documents handed to them by licensee/applicant/vendor personnel. The PM who receives such a document should send it to "Document Control Desk" for docketing and distribution.

For all formal documents generated by the PM, the LA and the secretary should ensure that an official file copy is sent to Central Files for proper docketing.

The PM should strive to reduce the amount of paper stored in his/her office by sending old, completed technical assignment control (TAC) files to Statistica, Inc. for processing into microfiche. All TAC file documents put on microfiche can be located by TAC number, docket number, accession number, author name, recipient name, or by other less-commonly-used search options. The greatest benefit of this is that all documents in the same file are tied together by the same TAC number.

PMs should strive to become proficient users of the NUDOCS. A half-day training course is available. It is also possible to learn to use the system in a short time by consulting a more experienced peer or by reading the manual.

6.3.2 Information Systems Branch

The PM indirectly interacts with the Information Systems Branch by submitting marked-up project manager reports every two weeks. Likewise, review branches also periodically submit marked-up reviewer reports. These two reports constitute the main input to the NRC-wide safety issues management system (SIMS). SIMS is being constantly improved. PMs who would like to know more about SIMS should contact this branch.

6.3.3 Library Branch

The NRC library provides a wide range of library and information services to the NRC staff. In addition to published books, journals, and technical reports contained in the collection, the library can provide, through interlibrary loan, access to materials and information held in other libraries. Reference services and research assistance are readily available.

The main NRC library has installed an automated integrated library system to access and service the NRC holdings. The reference section also includes computerized information retrieval systems containing multiple bibliographic data bases that permit a PM to rapidly gain access to the latest information in his/her field of interest.

The library maintains and makes available the permanent collection of codes and standards referenced in the licensing process.

6.3.4 Information Technology Services Branch

The Automated Graphics and Visual Communications Section in the Information Technology Services Branch prepares charts, graphs, and other items that must be drawn.

6.4 Office of the Controller

The Office of the Controller is responsible for overall agency budget development and execution and the development and application of financial control and accounting systems.

6.5 Office of the Secretary

The Office of the Secretary provides complete secretarial services required for the discharge of Commission business and implementation of Commission decisions. This office controls the scheduling of Commission business. It also plays a key role in providing Commission documentation to the public. The PM must be familiar with two key functions of this office as discussed below.

6.5.1 Docketing and Service Branch

The Docketing and Service Branch is responsible for several activities in the regulatory and adjudicatory areas. It performs the following activities:

- (1) develops and maintains official dockets of the Commission on matters involving hearings before the Commission, atomic safety and licensing boards, hearing examiners, the Atomic Safety and Licensing Appeals Board, and the Board of Contract Appeals, and releases orders from such hearings
- (2) receives for the Commission and distributes requests for intervention in licensing proceedings
- (3) coordinates issuance of all orders or promulgations of the Commission in such matters, ensuring notification of parties and appropriate public officials
- (4) coordinates for the Secretary's signature all notices of rulemaking approved by the Commission for public issuance
- (5) files with the Office of the Federal Register for publication all rules, notices, orders, and decisions required to be published in Title 10 of the Code of Federal Regulations
- (6) performs policy research in the above areas for the Commission, secretary, general counsel, the Executive Director for Operations, program offices, etc.
- (7) arranges for staff-generated reports to be incorporated into hearing transcripts and for reproduction of these transcripts

6.5.2 Public Document Rooms

For the convenience of the public in obtaining NRC public documents, the NRC public document rooms (PDRs) are established. As part of the regular procedure to facilitate the availability of information to the general public relative to a reactor facility, a local PDR (LPDR) is also established at one or more locations in the general vicinity of the reactor facility. (Establishment and maintenance of the LPDRs is the responsibility of the Local Public Document Room Branch in ADM.)

The NRC PDR provides services to members of the public who appear with requests for personal access to all available public documents on file. A contractor-operated copying service is also maintained for reproducing of documents. The NRC PDR provides individuals access to information on the Commission's activities. Members of the public, the press, and representatives from industry visit this room daily to copy documents and obtain information on a variety of subjects. This facility includes a reading room, a bibliography computer terminal, microfiche reader-printer machines, and desks. The staff has access to the computer files through several special terminals in the Bethesda complex. NRR Office Letter No. 102 provides additional details about the PDR.

APPENDIX A

ABBREVIATIONS USED IN THIS HANDBOOK

ACRS	Advisory Committee on Reactor Safeguards
ADP	Associate Director for Projects
ADT	Associate Director for Inspection and Technical Assessment
AEC	Atomic Energy Commission
AEOD	Office of the Analysis and Evaluation of Operational Data
ANS	American Nuclear Society
ANSI	American National Standards Institute
ARM	Office of Administration and Resources Management
ASLAB	Atomic Safety and Licensing Appeal Board
ASLB	Atomic Safety and Licensing Board
ASME	American Society of Mechanical Engineers
CEQ	Council on Environmental Quality
CESSAR	Combustion Engineering standard safety analysis report
CFP	Caseload Forecast Panel
CFR	<u>Code of Federal Regulations</u>
CP	construction permit
CRESS	Central Regulatory Electronic Stenographic System
CRGR	Committee to Review Generic Requirements
DCB	Document Control Branch
DCS	document control system
DEDROGR	Office of the Deputy Executive Director for Regional Operations and Generic Requirements
DES	draft environmental statement
DOD	Department of Defense
DOE	Department of Energy
EAB	Events Assessment Branch
ECS	Electronic Composition Services
EDO	Office of the Executive Director for Operations
EIA	environmental impact appraisal
EIS	environmental impact statement
EPA	Environmental Protection Agency
EPP	environmental protection plan
ER	environmental report
ES	environmental statement
ESR	early site review
ESRP	environmental standard review plan
FDA	final design approval
FDDA	final duplicate design approval
FEMA	Federal Emergency Management Agency
FES	final environmental statement
FR	<u>Federal Register</u>
FSAR	final safety analysis report

GESSAR General Electric standard safety analysis report
 HEU highly enriched uranium
 IAPM integrated assessment project manager
 IDVP independent design verification program
 IRC Incident Response Center
 ISAP Integrated Safety Assessment Program

 LA licensing assistant
 LER licensee event report
 LEU low-enriched uranium
 LPDR local public document room
 LPM licensing project manager
 LWA limited work authorization

 MPA multiplant action

 ND negative declaration
 NEPA National Environmental Policy Act of 1969
 NMSS Office of Nuclear Material Safety and Safeguards
 NPDES national pollution discharge elimination system
 NRC Nuclear Regulatory Commission
 NRR Office of Nuclear Reactor Regulation
 NSSS nuclear steam supply system
 NWPA Nuclear Waste Policy Act

 OCR optical character reader
 OGC Office of the General Counsel
 OI Office of Investigations
 OL operating license
 OMB Office of Management and Budget
 ORPM operating reactors project manager

 PAVS Printing and Audiovisual Services Branch
 PDA preliminary design approval
 PDDA preliminary duplicate design approval
 PDR public document room
 PEB Performance Evaluation Branch
 PM project manager
 PPMB Policy and Publications Management Branch
 PRA probabilistic risk assessment
 PSAR preliminary safety analysis report
 PTSB Policy Development and Technical Support Branch

 RAI request for additional information
 RES Office of Nuclear Regulatory Research
 RI resident inspector
 RIDS regulatory information distribution system
 RITS regulatory information tracking system
 RO Regional office
 RPB Regulatory Publications Branch
 RRES Rules Review and Editorial Section
 RRPM research reactors project manager

SALP systematic assessment of licensee performance
SAR safety analysis report
SE safety evaluation
SEP Systematic Evaluation Program
SER safety evaluation report
SIMS safety issues management system
SRP standard review plan
SSER supplemental safety evaluation report

TAC technical assignment control
TER technical evaluation report
TIA task interface agreement
TMI Three Mile Island

UFSAR updated final safety analysis report
USI unresolved safety issue

APPENDIX B

USEFUL DOCUMENTS

Code of Federal Regulations, Title 10, "Energy" (10 CFR); Title 40, "Protection of Environment" (40 CFR); and Title 43, "Public Lands; Interior" (43 CFR), U.S. Government Printing Office, Washington, D.C.

Executive Order 11988, "Flood Plains Management" - provisions of which can be found in 42 FR 26951, 43 FR 6030, 1978.

Executive Order 11990, "Protection of Wetlands" - provisions of which can be found in 42 FR 26961, 43 FR 6030, 1978.

Federal Register, 43 FR 38954, "Statement on Standardization of Nuclear Power Plants," U.S. Nuclear Regulatory Commission, August 31, 1977.

---, 45 FR 13739, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments," U.S. Nuclear Regulatory Commission, March 1980.

Prettyman, E. B., "A Manual on Trial Techniques in Administrative Proceedings," in A Manual on Trial Techniques in Administrative Proceedings and Illustrative Federal Administrative Agencies, Vol. I, Bar Association of the District of Columbia, Washington, D.C., 1958.

U.S. Department of the Interior, National Park Service, National Register of Historic Places, Vols. 1 and 2 (and subsequent listings as they appear in the Federal Register), 1976.

U.S. Nuclear Regulatory Commission, Manual Chapters ("Management Directives").

---, NRC Manual Chapter and Appendix 0517, "Management of Allegations," June 20, 1987.

---, NUREG-0103, "Standard Technical Specifications for Babcock and Wilcox Pressurized Water Reactors," August 1976; Rev. 4, October 1980.

---, NUREG-0123, "Standard Technical Specifications for General Electric Boiling Water Reactors," October 1976; Rev. 3, December 1980.

---, NUREG-0212, "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors," March 1977; Rev. 2, December 1980.

---, NUREG-0325, "U.S. Nuclear Regulatory Commission Functional Organization Charts," current revision.

- , NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors," June 1978; Rev. 4, November 1981.
- , NUREG-0544, "A Handbook of Acronyms and Initialisms," Rev. 1, April 1981.
- , NUREG-0555, "Environmental Standard Review Plans for the Environmental Review of Construction Permit Applications of Nuclear Power Plants," May 1979.
- , NUREG-0650, "Technical Writing Style Guide," November 1979.
- , NUREG-0650, "Technical Writing Style Guide: An Alternative Reference System for NRC Publications," Suppl. 1, February 1982.
- , NUREG-0770, "Glossary of Terms: Nuclear Power and Radiation," June 1981.
- , NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," July 1981 (includes Branch Technical Positions).
- , NUREG-0845, "Agency Procedures for the NRC Incident Response Plan," March 1982.
- , SECY 84-133, "Integrated Safety Assessment Program," March 23, 1984.