Guidelines and Workbook for Assessment of Organization and Administration of Utilities Seeking Operating License for a Nuclear Power Plant

Workbook for Assessment of Organization and Management

Manuscript Completed: October 1985

Date Published: September 1986

Prepared by

J. A. Thurber, J. Olson, R. N. Osborn, P. Sommers, R. D. Widrig, BHARC

Battelle Human Affairs Research Centers
Seattle, WA 98105

Pacific Northwest Laboratory
Richland, WA 99352

DISCLAIMER

**Prepared for
Division of Human Factors Technology
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555
NRC FIN B2360**

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

This document does not contain new requirements.

jsu

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency Thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

NOTICE

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, or any of their employees, makes any warranty, expressed or implied, or assumes any legal liability of responsibility for any third party's use, or the results of such use, of any information, apparatus, product or process disclosed in this report, or represents that its use by such third party would not infringe privately owned rights.

NOTICE

Availability of Reference Materials Cited in NRC Publications

Most documents cited in NRC publications will be available from one of the following sources:

- 1 The NRC Public Document Room, 1717 H Street, N W
Washington, DC 20555
- 2 The Superintendent of Documents, U S Government Printing Office Post Office Box 37082,
Washington, DC 20013-7082
- 3 The National Technical Information Service, Springfield, VA 22161

Although the listing that follows represents the majority of documents cited in NRC publications it is not intended to be exhaustive.

Referenced documents available for inspection and copying for a fee from the NRC Public Document Room include NRC correspondence and internal NRC memoranda, NRC Office of Inspection and Enforcement bulletins, circulars, information notices, inspection and investigation notices, Licensee Event Reports, vendor reports and correspondence, Commission papers, and applicant and licensee documents and correspondence.

The following documents in the NUREG series are available for purchase from the GPO Sales Program: formal NRC staff and contractor reports, NRC sponsored conference proceedings, and NRC booklets and brochures. Also available are Regulatory Guides, NRC regulations in the *Code of Federal Regulations*, and *Nuclear Regulatory Commission Issuances*.

Documents available from the National Technical Information Service include NUREG series reports and technical reports prepared by other federal agencies and reports prepared by the Atomic Energy Commission, forerunner agency to the Nuclear Regulatory Commission.

Documents available from public and special technical libraries include all open literature items, such as books, journal and periodical articles, and transactions. *Federal Register* notices, federal and state legislation, and congressional reports can usually be obtained from these libraries.

Documents such as theses, dissertations, foreign reports and translations, and non NRC conference proceedings are available for purchase from the organization sponsoring the publication cited.

Single copies of NRC draft reports are available free, to the extent of supply, upon written request to the Division of Technical Information and Document Control, U S Nuclear Regulatory Commission, Washington, DC 20555.

Copies of industry codes and standards used in a substantive manner in the NRC regulatory process are maintained at the NRC Library, 7920 Norfolk Avenue, Bethesda, Maryland, and are available there for reference use by the public. Codes and standards are usually copyrighted and may be purchased from the originating organization or, if they are American National Standards, from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

PREFACE

This revision of Guidelines and Workbook for Assessment of Organization and Administration of Utilities Seeking Operating License for a Nuclear Power Plant, Volume 2, NUREG/CR-4125, contains no substantive changes. Revision of the item numbers provided for cross-referencing have been made to correspond with changes in the Guidelines item numbers throughout this revision of the Workbook.

ABSTRACT

This report is a partial response to the requirements of Item I.B.1.1 of the "NRC Action Plan Developed as a Result of the TMI-2 Accident," NUREG-0660, and is designed to serve as a basis for replacing the earlier NUREG-0731, "Guidelines for Utility Management Structure and Technical Resources." The Guidelines are intended to provide guidance to the user in preparing a written plan for a proposed nuclear organization and administration. The purpose of the Workbook is to guide the NRC reviewer through a systematic review and assessment of a proposed organization and administration. It is the NRC's intention to incorporate these Guidelines and Workbook into a future revision of the Standard Review Plan (SRP), NUREG-0800. However, at this time the report is being published so that the material may be used on a voluntary basis by industry to systematically prepare or evaluate their organization or administration plans. Use of the report by the NRC would not occur until after it has been incorporated in the SRP.

EXECUTIVE SUMMARY

Guidelines and Workbook for Assessment of Organization and Administration of Utilities Seeking Operating License for a Nuclear Plant, NUREG/CR-4125, consists of two volumes:

Volume 1: Guidelines for Utility Organization and Administration Plan

Volume 2: Workbook for Assessment of Organization and Administration

This report was prepared by the Battelle Pacific Northwest Laboratories (PNL) under contract to the U.S. Nuclear Regulatory Commission. The report is a partial response to the requirements of Item I.B.1.1 of the "NRC Action Plan Developed as a Result of the TMI-2 Accident," NUREG-0660, and is designed to serve as a basis for replacing the earlier NUREG-0731, "Guidelines for Utility Management Structure and Technical Resources."

It is the NRC's intention to incorporate these Guidelines and Workbook into a future revision of the Standard Review Plan (SRP), NUREG-0800. However, at this time the report is being published as a report of government-sponsored work so that the material may be used on a voluntary basis by industry to systematically prepare or evaluate their organization or administration plans. Use of the report by the NRC would not occur until after it has been incorporated in the SRP.

Volume I: Guidelines for Utility Organization and Administration Plan.

The Guidelines are intended to provide guidance to the user in preparing a written plan for a proposed nuclear organization and administration. The Guidelines allow for individual approaches to organizational structures to account for differences in plant size, number of operating units, number of plant sites, and the individual utility approach to providing technical support. These unique approaches, however, should meet the criteria of a reasoned, fully developed, and logically consistent focus on the user's organization in terms of organization of work, policies and procedures, staffing, and external relationships. The Guidelines contain the following specific elements:

- The definition of key organization and administrative terms;
- A list of information required of license applicants in written form and for the site visit; and
- The acceptance criteria for the utility's organization and administration plan.

Volume 2: Workbook for Assessment of Organization and Administration.

The purpose of the Workbook is to guide the NRC reviewer through a systematic review and assessment of a proposed organization and administration. The Workbook outlines criteria for evaluating a written organization/administration plan and ensures consistent and

comprehensive review of organization plans and site visit materials. The Workbook is designed to be useful in three principal ways:

- (1) By providing descriptions of the basic terms used in the guidelines and description of the literature review that provides additional information on these concepts;
- (2) By outlining a process for the review and assessment of an organization plan with attention to site visit activity; and
- (3) By providing a protocol for assessing a proposed written organization plan.

The Workbook is designed to assist the NRC reviewer in assembling and analyzing objective information deemed necessary for judging acceptability of the plan, but it does not itself make the judgment.

ACKNOWLEDGMENTS

The authors appreciate the assistance and/or reviews provided by the following individuals: F. Allenspach, H. Booher, V. Boyer, R.J. Cole, P. Connor, L. Crocker, L.L. Cummings, L. Everett, K. Katterman, A.A. Marcus, P. McLaughlin, M.V. Nadel, N. Ped, C. Perrow, W. Russell, W. Scott, E. Shen, S. Smith, J. Sutherland, and K. Wilson.

Table of Contents

	<u>Page</u>
PREFACE	iii
ABSTRACT	v
EXECUTIVE SUMMARY	vii
ACKNOWLEDGEMENTS	ix
1.0 INTRODUCTION	1
1.1 Purpose	1
1.2 Scope	1
2.0 ACCEPTANCE CRITERIA	3
2.1 Completeness	3
2.2 Rationale	3
2.3 Achievability	4
3.0 ASSESSMENT PROTOCOL	7
3.1 Organization of the Review Team	7
3.2 Use of the Worksheets	7
3.3 Review of the Written Plan	8
3.4 Preparation for the Site Visit	9
3.5 Conduct of the Site Visit	10
3.6 Post-Visit Activities	12
3.7 Final Assessment	12
3.8 Preparation of the SER	15
APPENDIX A: Organization and Administration Assessment Worksheets	A-i

1.0 INTRODUCTION

This workbook provides a standard format for NRC review and assessment of proposed organization and administration plans submitted by utilities (applicants) seeking an operating license for a nuclear power plant. The Nuclear Regulatory Commission (NRC) requires submission of this organization and administration plan (OAP) as part of the FSAR, Chapter 13. In addition to the OAP, a site visit shall be used to obtain additional information needed to form the basis for the licensing decision in the organization and administration area.

1.1 Purpose

This workbook has been developed to ensure consistent and comprehensive NRC review of a utility's OAP. The primary purposes of the document are (a) to define the acceptance criteria and (b) to provide a protocol for assessing the OAP. Specific assessment worksheets used to examine written submissions and to conduct site visit interviews are contained in Appendix A.

1.2 Scope

The scope for this assessment is defined in the Guidelines for a Utility Organization Plan (August 1985), hereinafter called the Guidelines. The Guidelines cover organization of work, policies and procedures, staffing, and external relationships as they apply to the overall utility level organization, the nuclear organization, and the plant organization. These terms are defined in the Guidelines.

This workbook is derived directly from the Guidelines. Use of the worksheets contained in Appendix A ensures that each item in the Guidelines is addressed. (The reference column of the Worksheets contains the relevant Guidelines item numbers.) Furthermore, use of the assessment protocol along with the worksheets ensures consistency in NRC assessments from one applicant to another. It restricts reviews to a set of organization and administration issues whose relevance to safety has been demonstrated through literature reviews, empirical analysis, and staff experience.

The NRC Licensee Qualification Branch (LQB) will coordinate the overall organization and administration evaluation with evaluations conducted by various NRC branches concerned with the organization and administration of specific functions including the following: the Emergency Preparedness Licensing Branch (EPLB) reviews the acceptability of the emergency organization as part of its primary review responsibility for Final Safety Analysis Review (FSAR) Section 13.3; the Quality Assurance Branch (QAB) reviews the acceptability of the detailed quality assurance organization as part of its primary review responsibility for FSAR Section 17.0; and the Radiological Assessment Branch (RAB) reviews the acceptability of the radiation protection organization as part of its primary review responsibility for FSAR Section 12.5. The acceptance criteria necessary for the specific function reviews and their methods of application are contained in the SRP.

2.0 ACCEPTANCE CRITERIA

The NRC assessment of overall organization and administration is based on analysis of the written OAP submission of the utility, supplemented by oral statements obtained during interviews with the utility staff.

OAPs are acceptable if they are judged by the assessment team to be an adequate basis for safely operating a nuclear power plant. The burden of proof is on the applicant to demonstrate that the OAP is adequate.

The basis for a determination of adequacy is if an OAP: (1) is complete, (2) has a rationale for the elements within it, and (3) is achievable. Completeness refers to whether applicants have considered the issues defined in the Guidelines and have made a response of some sort. Rationale refers to whether applicants can justify the choices made. Achievable refers to whether the OAP is integrated with the rest of the applicant's organization and administrative practices and is understood by the key managers involved such that the OAP is feasible and can be implemented. These terms are further defined below.

2.1 Completeness

This criterion addresses whether applicants have at least considered all the items in the Guidelines. Completeness also means that all guideline items required in the OAP are included and that all prescriptive guideline items are met. The worksheets appended to this workbook identify the required and prescriptive items by checks in the "Required" column.

The prescriptive criteria are based on current NRC rules, regulatory guides, Branch Technical Positions, and/or ANSI standards. These items have been taken from the 1981 Standard Review Plan (Revision 2), Sections 13.1.1, 13.1.2 and 13.5.1. Thus, they reflect consistent NRC policy on these issues.

It should be emphasized that the completeness criterion does not mean that applicants must have every organizational or administrative feature identified in the worksheets. With the exception of the required items discussed above, the completeness criterion only means that they have given due consideration to each item. Their reason for not considering certain items or proposing alternative approaches is considered under the rationale criterion discussed below.

2.2 Rationale

This criterion addresses why applicants propose a particular type of organization or pattern of administration. In general, rationales for most decisions will be obtained during the site visit rather than from the OAP submittal. Documenting the reason for every decision is unrealistic. The rationale for many decisions will be apparent. However, at a minimum, applicants should show they have given careful consideration to the design of the major features of their proposed organization and administrative

system. There are many reasons that applicants may give for choices they have made, and many of them will have been made with less than perfect information. Each utility faces unique circumstances calling for managerial judgment. Acceptable types of rationale that utilities may use in defending their plans are outlined below.

- Regulation. Some design aspects of the plant or utility may be subject to requirements or regulations that limit the discretion of utility managers. NRC requirements and regulatory or legislative requirements derived from any federal or state agency should be cited, where applicable.
- Study. Some design aspects may be supportable by reference to a well-designed and executed study. A study directed specifically to the organization or management aspect in question for a nuclear facility, may be cited, or a study dealing with some other industry or management aspect may be acceptable in some cases. In the latter instance, the review team will need to consider whether the study is truly relevant to the issue at hand.
- Formal Reasoning. Aspects of the OAP may be supported by formal reasoning. This reasoning may involve analogies derived from practices elsewhere (e.g., other nuclear power plants, non-nuclear facilities, etc.). In any event, applicants should be able to explain why these situations are relevant to the proposed plant.
- Managerial Judgment. Some aspects of the proposed design cannot be supported on the basis of regulations, empirical data, or formal reasoning. Unique conditions call for the professional preferences of managers and supervisors. Even in these cases, management should be able to provide a logical argument for why they made the decision, including why they discarded other alternatives.

Some rationales may, in fact, suggest that respondents do not know why a particular choice was made nor the advantages or disadvantages of the choice. For example, rationales based solely on cost constraints, or "company philosophy," or orders from a "higher authority" are not sufficient. Generally these denote a condition where individuals are unlikely to know why, how, or if their actions contribute to plant safety. Repetition of a weak rationale may be considered a strong signal that the proposed plan itself is neither complete nor achievable. Reviewers will have to exercise judgment about whether particular rationales are acceptable.

2.3 Achievability

This criterion addresses two main issues. Will the OAP provide the level of resources, control, coordination, and longer-term improvements desired? Is the proposed OAP properly integrated between the corporate and plant levels, and horizontally among the plant organizational components so as to achieve the intent of the OAP?

The second aspect of this criterion is whether various features of the OAP are understood by the key managers and staff involved. Without this understanding, the OAP cannot be effectively implemented and safe plant operation will be jeopardized.

3.0 ASSESSMENT PROTOCOL

This section describes the assessment protocol for review team members. It covers the organization of the review team, the review of the written plan, use of the Appendix A worksheets as the basis for the site visit, conduct of the site visit, post-visit activities, final assessment of utility responses, and preparation of the Safety Evaluation Report (SER).

3.1 Organization of the Review Team

The review team should be formed approximately one month prior to the planned review of the applicant's written OAP submittal. This timing permits completion of the necessary background data analysis and preparation for proceeding expeditiously with the assessment as soon as the FSAR is received. Forming the team too early could lead to unnecessary rework by team members if some changes in job assignments are required in the interim.

The organization and administration assessment should be organized, directed, and controlled by a Team Leader from the NRC Licensee Qualifications Branch (LQB) staff. The team preferably should consist of four individuals, including the team leader, who are trained to conduct these assessments. To the extent possible, team members also should have a variety of relevant backgrounds, experience, and come from different professional disciplines.

3.2 Use of the Worksheets

The Organization and Administration Assessment Worksheets contained in Appendix A are a guide to help review team assessment efforts. They should be used in each stage of the review process as described below. By completing the worksheets, all of the items in the Guidelines will be covered. Eventually, the team leader should compile a master worksheet set incorporating all of the information gathered by team members. These master worksheets for the proposed plant will contain the information needed to prepare the SER.

Each major section of the worksheets (Appendix A: Sections 5 through 8) consists of four parts: (1) a checklist of significant items, (2) space for other major probes, (3) space for comments, and (4) specific assessment items. The first three parts of each section should be filled in based on reviews of the written submittal and site visit discussions before the assessment items are addressed. The assessment items should be considered last by the team as a whole, as described in Section 3.7 below.

An essential feature of the worksheets is that only the assessment sections require an adequacy judgment. A judgment on the adequacy or effectiveness of particular organizational arrangements described in the checklists should be avoided. For example, an item asks whether there is a "policy/procedure in place for using the formal performance appraisal system"? The yes/no answer only applies to whether such a system is in place, not to how effective the system is.

The final section of the worksheets is an overall summary (Section 9). It brings together the major assessments made in earlier sections to provide a focus for the final assessment the team must make regarding the overall adequacy of the applicant's OAP (see Section 3.7 below).

Appendix B contains a similar set of worksheets for the safety review function. Safety review worksheets have been incorporated in this Workbook because it is a management-level function and part of the review responsibility of DHFS. Separate guidelines on the subject of safety review are in the process of development.

The worksheets also may be augmented by any other additional data, interview guides, comments, etc., all of which eventually will form the written record that supports the SER. The reference column in the worksheets can be used to note the existence and location of any such supplementary materials.

The worksheets are designed to facilitate updating in the future as additional experience is obtained in their use. For example, experience may suggest adding new checklist items (typically from the "other major probe" category) or dropping others that are not applicable.

3.3 Review of the Written Plan

This review involves six basic steps:

- (1) As soon as the review team is formed, Worksheet Sections 1 through 3 should be filled out providing background data on the applicant and NRC staff involved (Sections 1 and 2), and the applicant's relevant construction and operating experience (Section 3). Assessment date information (Section 2.6) needed for records purposes should be filled in later when available.
- (2) Based on Section 3 data, the review members should complete Section 4 providing an assessment of the applicant's safety performance in constructing the proposed plant and, where applicable, in operating other nuclear power plants. The purpose of this assessment is to provide an initial basis for evaluating the applicant's OAP. A history of good performance should be considered in designing the assessment effort. A lesser performance should suggest more in-depth probes of vital areas.

In completing Section 4, the checklist items should be filled in first by the team members responsible for each Section 5 through 8. Then the full team should meet to collectively complete the assessment questions. This provides two things: (1) better balanced judgment in making the assessment and (2) better common understanding among team members of the basis for the later assessment.

- (3) The team should complete as many of the checklist items as possible in Sections 5 through 8 of the worksheets (5. Organization, 6. Policies and Procedures, 7. Staffing, and 8. External Relationships) at the beginning of the review of the OAP. Analysis of organization charts, responsibilities and authorities, and job descriptions should provide the basis for many of the Section 5 and 7 checklist items. Tables of contents of policy and procedure manuals should provide considerable information for Section 6 and 7 checklist items.
- (4) Missing items required in the submittal should be identified and requested from the applicant following standard NRC procedures for requesting this information (normally through the DL project manager). Additional checklist items should be completed upon receipt of the missing information.
- (5) In parallel with steps 3 and 4, other NRC branches should be contacted to help complete checklist items in functional areas, including:
 - Radiological protection (RAB);
 - Quality assurance (QAB);
 - Emergency preparedness (EPLB);
 - Security (Physical Security Licensing Branch, Nuclear Materials Safety and Safeguards);
 - Fire protection (CEB).
- (6) Based on the checklist items completed from the FSAR submittal, the team should meet to agree upon:
 - Additional information needed from the site visit;
 - Unusual or questionable areas which need special attention in the site visit.

The latter item is particularly important. Completeness, rationale, and achievability should be key aspects of this initial assessment. Note, however, that although the acceptance criteria should have been considered, none of the Section 5 through 8 assessment items should have been completed at this point. These items should wait until after the site visit.

3.4 Preparation for the Site Visit

The purposes of the site visit should be to clarify any key problem areas identified in the review of the written OAP and obtain the additional information needed to complete the assessment of the OAP. The results of the team meeting described in item 6 above provide the basis for

developing the site visit strategy. Four main actions should be taken at this point:

- (1) The team should agree on a tentative agenda for the site visit, including identifying the people they want to interview, who on the team should conduct each interview, and the subject areas they want to address in each interview.
- (2) The site visit should be scheduled following standard NRC procedures, and agreement on the agenda should be reached with the applicant. The latter may involve several discussions with the applicant. Ideally, the site visit should be scheduled as close to the planned start-up date as possible given the licensing schedule. To the extent possible all OL site visits should be held at about the same time prior to start-up so as to permit more meaningful comparisons of the information obtained.
- (3) In parallel with items 1 and 2 above, an interview guide with standard questions and possible probes may be drafted to be used in lieu of or in addition to the worksheets on the site visit. An interview guide is a list of questions or issues that are to be explored in the course of interviews with utility employees. The interview guide provides topics or subject areas and specific questions and gives the interviewer a structured format with which to explore, probe, and make additional inquiries.

If an interview guide is used, it is essential that it be carefully structured to address all the issues needed to complete the worksheets after the site visits.

- (4) A final team meeting should be held immediately prior to the site visit, ideally the day before. At this time the final site visit strategies and plans should be reviewed and final adjustments made.

3.5 Conduct of the Site Visit

There are several important points to consider in conducting the site visits:

- (1) Interviews should be planned to augment the information received in written form, particularly on rationale issues, and to enable the NRC to check on the consistency of written and oral information supplied by the utility.
- (2) Site visits ideally should last no more than about three days, but in some cases may have to be extended.
- (3) Adequate physical facilities should be arranged for meetings during the site visits to provide a non-distracting atmosphere.

- (4) Each member of the review team should endeavor to do a minimum of four interviews per day. Most interviews should be conducted by one person with a second person taking notes. In no case should more than three team members simultaneously conduct an interview with a utility employee, with the exception of the entrance and exit meetings.
- (5) Interviews should be carried out in a room that provides for privacy. If an employee does not have an office with doors, the interview should be conducted in a place where co-workers cannot overhear or interfere. Utility supervisors and higher managers should not be present during interviews with subordinates.
- (6) Corporate, nuclear level, and plant level managers should all be interviewed. All the major functional areas important to safety should be covered. Selected lower level utility personnel also should be interviewed.
- (7) Interviewees should be selected by the NRC staff rather than by the utility. However, it is inevitable that the utility will play a role in this process.
- (8) Interviews should be conducted using good interview techniques. Team members should have training in this area as part of their preparation for the review.
- (9) The detailed interview guide or worksheets are likely to contain more questions than can be asked in an hour. Interviews typically should not run longer than this amount of time. Time also should be available for extemporaneous probes. As a consequence, it is necessary to target specific questions at the utility personnel who are in the best position to answer them.
- (10) Key questions should be asked at least three times, preferably by different team members of different individuals. Asking the same question more than twice checks the accuracy of the responses. It can uncover inconsistencies and uncertainties in how the plan has been formulated and is likely to be implemented.
- (11) Questions should be asked both of individuals who have drafted specific aspects of the OAP and, if different, of individuals who are supposed to implement the same aspects of the OAP to check whether understandings are similar and the OAP can be implemented as intended. Other knowledgeable individuals who are in a position to comment on the completeness, rationale, and achievability of aspects of the OAP should be interviewed.

- (12) An entrance meeting should be planned involving all team members and key applicant staff to confirm the purpose of the visit, make any final modifications to the agenda, review the planned interview process, and finalize meeting logistics. Overall OAP issues also may be discussed at this time.
- (13) An exit meeting should be planned involving all team members and key applicant staff. Any potential problem areas identified so far should be discussed and either resolved or plans for their resolution established. Any follow-up actions by the applicant should be clearly identified and agreed upon. This agreement should be put in writing either at the meeting or in a follow-up letter from the NRC to the applicant.
- (14) NRC team meetings should be held each evening to review the day's progress and plan any changes needed in the following days. Such meetings may also be needed during the day if significant developments occur which should change the planned activities.

3.6 Post-Visit Activities

Following the site visit, several steps are involved before making the final assessment.

- (1) The team should meet as soon as possible after the site visit (within one week) to collectively fill out the master worksheets for the proposed plant. Individual notebooks, worksheets, interview guides, notes taken during interviews, summaries of the interviews, and additional documents collected should be retained as part of the record.
- (2) Checklist items, other major probes, and comment sections of the master worksheets should be filled in first. Assessment items should not be completed until these sections are finished.
- (3) If it is found at this time that some checklist or other important information is missing and it has not already been identified at the exit meeting for applicant follow-up, normal NRC procedures should be followed to obtain this information.
- (4) When received from the applicant, the final checklist and related information should be added to complete these sections of the worksheets.

3.7 Final Assessment

When the non-assessment items of the worksheets have been completed, the team should meet as a whole to make the final assessment. The steps involved include:

- (1) All information gathered by the team should be compiled into a master set of worksheets by the team leader. The results of all steps below should be recorded on the master worksheet set.
- (2) The worksheet assessment questions in each of Sections 5 through 8 (5. Organization, 6. Policies and Procedures, 7. Staffing, and 8. External Relations) need to be completed. They should focus the discussion on the acceptance criteria.
- (3) Regarding completeness, it is neither expected nor intended that all checklist items will be in the affirmative. Completeness refers only to whether any applicant has considered the item. However, required items that are missing need to be explained in the comments section. If a satisfactory rationale has not been presented, the completeness question should be marked either "No" or "Conditional Yes" with an explanation provided in the comments below. The conditions associated with a "Conditional Yes" should always be clearly defined in the comments section.
- (4) Regarding whether an appropriate rationale has been provided for key items, this is a team judgment based primarily upon notes taken during the site visit. In making an assessment in this area, the team should consider the priority of the issue involved. For example, some items not backed by an acceptable rationale may be relatively minor compared to others that have an acceptable rationale. In the cases of minor items where the rationale is missing, the overall assessment may still be positive. Note, however, that from the beginning the team should not have been probing minor areas in great depth.

The lack of an adequate rationale backing major OAP decisions, however, is likely to be serious. Every attempt should be made by the review team to resolve rationale problems with the applicant prior to the final assessment. Applicants should be given the opportunity to provide adequate justification for their major decisions or reopen those decisions and resolve them in a different manner if justified.

If a "No" or "Conditional Yes" answer is given, a full explanation should be provided in the comments section by the team.

- (5) Regarding whether the intended actions are achievable, there are a number of checklist items dealing with whether key managers understand (and agree with) what is written in the OAP. If there are significant areas of the OAP where managers lack this understanding, effective implementation of the OAP becomes questionable and the team may have to consider a "No" or "Conditional Yes" answer. Similarly, major areas that do not appear to be effectively integrated between corporate and plant levels, or among components at the plant level, may force consideration of a "No" or "Conditional Yes" answer.

If team members cannot give a "Yes" answer to this criterion, applicants should be given the opportunity to adequately explain how their OAP is integrated into their overall system or, if not, they should reopen their planning decisions to make sure the OAP is integrated. Similarly, if key managers do not understand the OAP, time should be taken to develop this understanding and acceptance. This may result in some modifications to the OAP.

To the extent possible these issues should be addressed in the site visit exit interview such that the necessary corrective action can be completed as part of the follow-up actions. Later site visit discussions may be required to resolve problems in this area.

A "No" or "Conditional Yes" answer to these achievability questions should be fully explained in the comments.

- (6) Once the completeness, rationale, and achievable questions are answered, the team should address the "adequacy" question. Adequacy is defined by the previous criteria. A "Yes" to all three should result in a positive answer with respect to adequacy. If the team decides otherwise, their reasoning should be clearly presented in the comments section.

If any of the three criteria questions is answered "No" or "Conditional Yes" (indicating that the issues involved have not been resolved with the applicant), the team still may consider whether it can justify a "Yes" answer to the adequacy question. In general, "No" or "Conditional Yes" answers to individual criterion items should mean that the team will have difficulty justifying a "Yes" answer to the adequacy question. Priorities among the various issues should be considered.

If one or more of the criteria questions is marked other than "Yes," the reasons behind whatever answer is given should be fully explained in the comments section, as the answer and the reasoning behind it will feed into the SER.

After the team completes the assessments in Sections 5 through 8, the overall assessment of the OAP (Section 9 of the worksheets) should be completed. This involves the following steps:

- (1) The adequacy question answers from Sections 5 through 8 should be marked down in the Section 9 worksheets.
- (2) Based on the answers to the Section 5-8 adequacy questions, the team should answer the questions on whether the OAP provides for adequate overall control, integration/coordination, and longer term improvements. The structure of the Sections 5-8 adequacy questions is designed specifically to permit these overall determinations. Similar questions were answered in each of the individual sections, with the exception of Section 8.

An overall "Yes" answer could be given to one of these three overall adequacy questions despite a "No" or "Conditional Yes" answer to the similar question in one of the Sections 5-8 categories. The team could make this judgment based on judgments of relative emphasis among categories. For example, even though the team judges the organizational design does not adequately facilitate control, the control features built into the policies/procedures and staffing systems may more than offset the organizational deficiencies. The reasoning behind such decisions should be clearly indicated in the comments.

Reasoning behind anything other than a "Yes" answer to these three overall adequacy questions should be clearly identified in the comments section. Similarly, if any of the related Sections 5-8 questions are marked other than "Yes," the reasoning behind the overall answer should be provided. This information will go into the SER.

- (3) Based on all the answers provided above, including those for Sections 5 through 8, the team should answer the final overall assessment question regarding the adequacy of the applicant's OAP.

Again the overall OAP may be judged to be adequate despite deficiencies ("No" or "Conditional Yes" answers) in selected areas. The same reasoning described in item 2 above applies regarding comparative emphasis among categories. Deficient areas may be more than offset by other strong areas.

The reasoning behind the final overall decision should be clearly described in the comments section regardless of the decision. Any conditions which must be met for OAP approval ("Conditional Yes") should also be clearly defined. All this information will go into the SER.

It should be emphasized that every effort should be made by the team to get applicants to correct significant deficiencies in their OAPs such that they do not remain at the time of SER preparation.

3.8 Preparation of the SER

Once the master assessment worksheets are completed, the SER can be prepared. The content of the SER should be based upon the worksheet answers. That is, each adequacy question in the worksheets should be separately addressed in the SER along with the reasoning behind the adequacy decision.

Thus, every item on the Section 9 summary would be addressed, and a logical and consistent case would be established, building to the final decision as to the adequacy of the applicant's OAP.

APPENDIX A

ORGANIZATION AND ADMINISTRATION ASSESSMENT WORKSHEETS

APPENDIX A
ORGANIZATION AND ADMINISTRATION ASSESSMENT WORKSHEETS

Plant Title: _____
Applicant: _____
Date: _____

TABLE OF CONTENTS

	<u>Page</u>
1.0 UTILITY CONTACTS	A-1
2.0 PRINCIPAL NRC STAFF	A-3
3.0 BACKGROUND DATA: APPLICANT'S PROPOSED PLANT	A-7
4.0 ANALYSIS OF BACKGROUND DATA	A-11
5.0 PROPOSED ORGANIZATION OF WORK	A-17
6.0 PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES	A-35
7.0 PROPOSED STAFFING	A-45
8.0 EXTERNAL RELATIONSHIPS	A-57
9.0 OVERALL SUMMARY	A-61

1.0 UTILITY CONTACTS

(Obtain from or with the aid of the NRC-DOL project manager)

1.1 Principal Contact at the Corporate Level

Name _____
Title _____
Address _____

Telephone Number _____

1.2 Principal Contact at the Nuclear Level (if applicable)

Name _____
Title _____
Address _____

Telephone Number _____

1.3 Principal Contact at the Plant Level

Name _____
Title _____
Address _____

Telephone Number _____

2.0 PRINCIPAL NRC STAFF

2.1 NRC Division of Licensing Project Manager

Name _____

Title _____

Address _____

Telephone Number _____

2.2 I & E Senior Resident Inspector

Name _____

Title _____

Address _____

Telephone Number _____

2.3 I & E Resident Inspector

Name _____

Title _____

Address _____

Telephone Number _____

2.4 Regional Office

Contact Person _____

Address _____

Telephone Number _____

PRINCIPAL NRC STAFF

2.5 NRC Assessment Team

2.5.1 NRC Assessment Team Leader

Name _____
Title _____
Address _____

Telephone Number _____

NRC Assessment Team Members

2.5.2 Name _____
Title _____
Address _____

Telephone Number _____

2.5.3 Name _____
Title _____
Address _____

Telephone Number _____

2.5.4 Name _____
Title _____
Address _____

Telephone Number _____

PRINCIPAL NRC STAFF

2.6 Assessment Dates

2.6.1 Date of FSAR Chapter 13 submission _____

2.6.2 Date of site visit: initial _____

2.6.3 Date of site visits: follow-up _____

2.6.4 Date assessment was completed _____

3.0 BACKGROUND DATA: APPLICANT'S PROPOSED PLANT*

(The following information should be gathered from NRC documents or other public sources rather than from the applicant.)

- 3.1 Plant Name _____
- 3.1.1 Street Address _____
- 3.1.2 City, State, Zip Code _____
- 3.1.3 Name Plate Generating Capacity _____
- 3.1.4 NSSS Vendor _____
- 3.1.5 Model _____
- 3.1.6 Architect/Engineer _____
- 3.1.7 Construction Management _____
- 3.1.8 Construction Permit Issuance Date _____
- 3.1.9 Scheduled Fuel Load Date _____
- 3.1.10 Number of Regulation 50.55(e) Reports in Last 3 Years _____
- 3.1.11 Number of Violations in Quarterly Reports
on Enforcement in Last 3 Years _____
- 3.1.12 Employee Turnover Rates (if applicable from applicant) _____

* "Proposed plant" refers to the nuclear power plant which is the subject of this operating license review.

BACKGROUND DATA

3.1.13 Summary of Any Significant Organization and Administration Problems During Construction of This Plant

BACKGROUND DATA

3.2 Background Data: Other Nuclear Power Plants (NPPs) in the Applicant's Utility System

History of plant performance. (Include data for 3 years prior to data of assessment or entire history of plant if on line less than 3 years.)

- 3.2.1 Plant Name _____
- 3.2.2 Street Address _____
- 3.2.3 City, State, Zip Code _____
- 3.2.4 Name Plate Generating Capacity _____
- 3.2.5 NSSS Vendor _____
- 3.2.6 Model _____
- 3.2.7 Architect Engineer _____
- 3.2.8 Year On Line _____

Enter the data required in items 3.2.9 to 3.2.15 for the most recent 3 years which are available.

	Year:	_____	_____	_____
3.2.9 Total LERs
(SOURCE: RECON database)		_____	_____	_____
3.2.10 Total Human Error LERs
(SOURCE: RECON database)		_____	_____	_____
3.2.11 Number of forced outages
(SOURCE: Greybook)		_____	_____	_____
3.2.12 Capacity factor (hours on
line/hours in year)
(SOURCE: Greybook)		_____	_____	_____
3.2.13 Unit availability (hours
available/hours in year)
(SOURCE: Greybook)		_____	_____	_____
3.2.14 Personnel radiation
exposure (man-rems)
(SOURCE: Quarterly Reports
from Utility to NRC)		_____	_____	_____
3.2.15 Employee turnover rate
(if applicable from
applicant)		_____	_____	_____

BACKGROUND DATA

3.2.16 Summary of Applicant's Significant Organization and Administration Problems in Constructing and Operating Other Nuclear Power Plants

4.0 ANALYSIS OF BACKGROUND DATA

4.1 Background Information on Applicant's Other NPPs

The term "average" as used in the items below refers to an average across plants similar in type (BWR or PWR), age, and perhaps other factors such as region.

	<u>Yes</u>	<u>No</u>	<u>Reference</u>
4.1.1 Is the total number of LERs average or fewer than average?	_____	_____	
4.1.2 Is the total LER trend staying constant or decreasing?	_____	_____	
4.1.3 Is the total number of human error LERs average or fewer than average?	_____	_____	
4.1.4 Is the total human error LER trend staying constant or decreasing?	_____	_____	
4.1.5 Is the number of forced outages average or fewer than average?	_____	_____	
4.1.6 Is the forced outage trend staying constant or decreasing?	_____	_____	
4.1.7 Are the capacity factors average or higher than average?	_____	_____	
4.1.8 Is the capacity factor trend staying constant or increasing?	_____	_____	
4.1.9 Is the availability of each nuclear unit average or higher than average?	_____	_____	
4.1.10 Is the availability trend staying constant or increasing?	_____	_____	
4.1.11 Are personnel radiation exposures average or lower than average?	_____	_____	

ANALYSIS OF BACKGROUND DATA

	<u>Yes</u>	<u>No</u>	<u>Reference</u>
4.1.12 Is the personnel radiation exposure trend staying constant or decreasing?	_____	_____	
4.1.13 Have the applicant's other NPPs operated without significant safety-related events in recent years?	_____	_____	
<u>Comments</u>			

ANALYSIS OF BACKGROUND DATA

4.2 Background Information on Proposed Plant

	<u>Yes</u>	<u>No</u>	<u>Reference</u>
4.2.1 Are the Regulation 50.55(e) Reports on this plant average or fewer than average?	_____	_____	
4.2.2 Do the Quarterly Reports on Enforcement on this plant contain average or fewer than average violations?	_____	_____	
<u>Comments</u>			

ANALYSIS OF BACKGROUND DATA

4.3 Summary Assessment

	<u>Yes</u>	<u>No</u>	<u>Reference</u>
4.3.1 Do the data on the applicant's other NPPs (if any) suggest any problems in the applicant's corporate or nuclear level organization?	_____	_____	
If yes, which aspects of the corporate or nuclear level organization should be reviewed in depth in this OL review?			

4.3.2 Do the data on the applicant's other NPPs (if any) suggest any problems in the applicant's plant level organizations?	_____	_____	
If yes, which aspects of the applicant's plant level organization should be reviewed in depth in this OL review?			

ANALYSIS OF BACKGROUND DATA

	<u>Yes</u>	<u>No</u>	<u>Reference</u>
<p>4.3.3 Do the data on the applicant's management of the design and construction of the proposed NPP suggest any problems that will carry over into the start-up and operational phases of the project?</p> <p>If yes, which aspects of the applicant's organization should be reviewed in depth in this assessment?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	_____	_____	
<p>4.3.4 The potential problem areas listed above in response to questions 1, 2, and 3 should be examined to determine if improvements are contained in the OAP to strengthen the applicant's organization? Notes should be entered in the Comment or Reference sections of the work-sheets to ensure proper follow-up on these issues in the written plan assessment, site visit, and final assessment.</p>	_____	_____	
<p>4.3.5 Have the notes been entered?</p>	_____	_____	

5.0 PROPOSED ORGANIZATION OF WORK

5.1 Checklist of Significant Organization Design Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference*</u>
5.1.1 Organization charts submitted?	<u>X</u>	___	___	4.4.1
5.1.2 All organizational units from CEO to plant supervisory level shown on organization charts?	<u>X</u>	___	___	4.4.2
5.1.3 Organization of all other power plants in applicant's system shown on organization charts?	<u>X</u>	___	___	4.4.2
5.1.4 All standing committees or other informal organizational forms important to safety described?	<u>X</u>	___	___	4.4.3
5.1.5 Numbers and types of people in each organization unit shown?	<u>X</u>	___	___	4.4.1
5.1.6 All major safety-related functions covered in organization charts?				
• Operations	<u>X</u>	___	___	4.4.12
• Maintenance	<u>X</u>	___	___	4.4.12
• Radiological protection	<u>X</u>	___	___	4.4.12
• Plant chemistry	<u>X</u>	___	___	4.4.12
• Engineering	<u>X</u>	___	___	4.4.12
• Training	<u>X</u>	___	___	4.4.12
• Safety review	<u>X</u>	___	___	4.4.12
• Quality assurance	<u>X</u>	___	___	4.4.12
• Fire protection	<u>X</u>	___	___	4.4.12
• Security	<u>X</u>	___	___	4.4.12

* Guidelines item numbers are provided in this column to facilitate cross-referencing to the Guidelines. In addition, this column may be used to note the location of any supplementary materials used in the review of an applicant's plan.

PROPOSED ORGANIZATION OF WORK

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.1.7	Emergency response organization shown?	<u>X</u>	<u> </u>	<u> </u>	4.4.6; 4.4.12
5.1.8	Any special plant start-up organizations shown?	<u>X</u>	<u> </u>	<u> </u>	4.4.9
5.1.9	Positions staffed routinely by contractor personnel identified?	<u> </u>	<u> </u>	<u> </u>	4.4.11
5.1.10	Spans of control reasonable for <u>key managers other than first-line supervisors?*</u>				

If no, list organization units
for potential follow-up probes:

* The span of control of a manager is computed by counting all non-clerical personnel reporting directly to that manager.

PROPOSED ORGANIZATION OF WORK

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.1.11 Number of management levels reasonable for safety-related areas.*	_____	_____	_____	
If no, list areas for follow-up probes:				

5.1.12 Organization and staffing of proposed plant similar to that of other NPPs in applicant's system?	_____	_____	_____	4.4.2
If no, list areas of difference for possible follow-up probes:				

* "Management levels" include the first-line supervisor and the chain of managers above him or her up to and including the chief executive officer (CEO) or equivalent of the utility.

PROPOSED ORGANIZATION OF WORK

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.1.13 Sharing of services or management responsibilities for more than one plant in applicant's system is described?	___	___	___	4.4.2
If no, list areas for possible follow-up probes:				

5.1.14 The functional areas of radiation protection, quality assurance, and training are independent from unwarranted diversion from functional responsibilities?	___	___	___	4.4.17

PROPOSED ORGANIZATION OF WORK

5.1.15 Other Major Probes

<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
---------------	------------	-----------	------------------

_____	_____	_____	
-------	-------	-------	--

_____	_____	_____	
-------	-------	-------	--

_____	_____	_____	
-------	-------	-------	--

_____	_____	_____	
-------	-------	-------	--

Comments

PROPOSED ORGANIZATION OF WORK

	<u>Yes</u>	Cond. <u>Yes</u>	<u>No</u>	<u>Reference</u>
5.1.16 Assessment of Organizational Design				
Is the information complete?	_____	_____	_____	
Is there a rationale for the applicant's intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	

Comments

Is the overall organization design adequate?

Comments

5.2 Checklist of Significant Control Items

A-23

PROPOSED ORGANIZATION OF WORK

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.2.5	The responsibilities and authorities of operating organization personnel conform to the requirements of:				
	● ANSI 18.7, Section 5.2 "Rules of Practice"?	_____	_____	_____	
	● ANSI 18.7, Section 4.4, "On-Site Review" as endorsed by Regulatory Guide 1.3.3 (Rev. 2)?	_____	_____	_____	
	● ANSI 18.1, Section 3.2, as endorsed by Regulatory Guide 1.8 (Rev.1)?	_____	_____	_____	
<u>Comments</u>					

PROPOSED ORGANIZATION OF WORK

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.2.6	Description of any special organizational forms designed to control activities?	___	___	___	4.4.5
	<ul style="list-style-type: none"> Any special organizational forms responsible for identifying possible non-normal operating conditions and for planning responses? 	___	___	___	4.4.6

Comments

PROPOSED ORGANIZATION OF WORK

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.2.7 Key managers can describe the primary responsibilities and authorities assigned to them and to the people below them?	_____	_____	_____	4.4.4; 4.4.7
5.2.8 Plant shutdown authority defined for key staff?	_____	_____	_____	
5.2.9 Plant start up authority defined?	_____	_____	_____	
5.2.10 Key managers and other personnel agree on who has plant shutdown authority?	_____	_____	_____	
5.2.11 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		_____	_____	
		_____	_____	
		_____	_____	
		_____	_____	

Comments

PROPOSED ORGANIZATION OF WORK

	<u>Yes</u>	Cond. <u>Yes</u>	<u>No</u>	<u>Reference</u>
5.2.12 Assessment of Control Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the applicant's intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	

Comments

Does the applicant's organizational design adequately facilitate control of work?

Comments

PROPOSED ORGANIZATION OF WORK

5.3 Checklist of Significant Coordination/Integration Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.3.1 Position descriptions of key managers define coordination/integration responsibilities?	___	___	___	4.4.10
5.3.2 Key managers agree on their coordination/integration responsibilities?	___	___	___	4.4.10
5.3.3 Standing committees or other informal organizational forms used to facilitate coordination/integration?	___	___	___	4.4.5
If <u>yes</u> , identify selected ones for possible follow-up probes:				

5.3.4 Location of key staff designed to facilitate essential coordination/integration responsibilities?	___	___	___	4.4.2; 4.4.13
If no, identify problem areas for follow-up probes:				

PROPOSED ORGANIZATION OF WORK

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.3.5 Description of any holding company or other superior corporate entity relationship submitted? (If none, so state.)	___	___	___	
If yes, identify issues for follow-up probes as necessary:				

5.3.6 Description of any plant share or joint venture ownership submitted? (If none, so state.)	___	___	___	
If yes, identify issues for follow-up probes as necessary:				

PROPOSED ORGANIZATION OF WORK

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.3.7 Description of any power pool or coordinating agreement submitted? (If none, so state.)	_____	_____	_____	

If yes, identify issues for follow-up probes as necessary:

5.3.8 Other Major Probes	<u>Yes</u>	<u>No</u>	<u>Reference</u>
--------------------------	------------	-----------	------------------

Comments

PROPOSED ORGANIZATION OF WORK

	<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
5.3.3 Assessment of Coordination Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the applicant's intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	

Comments

Is the overall coordination/integration system for organization of work adequate?

Comments

PROPOSED ORGANIZATION OF WORK

5.4 Checklist of Significant Improvement Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
5.4.1 Position descriptions of key managers define longer-term safety improvement responsibilities?	_____	_____	_____	
5.4.2 Formal organizational unit(s) established with specific responsibilities to effect longer-term improvements?	_____	_____	_____	
If <u>yes</u> , list for possible follow-up probes:				

5.4.3 Standing committees or other organizational forms used to facilitate longer-term safety improvements?	_____	_____	_____	
If <u>yes</u> , list for possible follow-up probes:				

5.4.4 Key managers and other personnel agree on how the organization is designed to facilitate longer-term safety improvements?	_____	_____	_____	

PROPOSED ORGANIZATION OF WORK

5.4.5 Other Major Probes

<u>Yes</u>	<u>No</u>	<u>Reference</u>
------------	-----------	------------------

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

Comments

PROPOSED ORGANIZATION OF WORK

	<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
5.4.6 Assessment of Improvement Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant's organizational design adequately facilitate longer-term improvement of work?

Comments

6.0 PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

6.1 Checklist of Significant Administrative Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
6.1.1 Table of contents of applicable policy and procedure manuals submitted?	<u>X</u>	<u> </u>	<u> </u>	4.5.1
6.1.2 All policy and procedure areas important to plant safety included?	<u> </u>	<u> </u>	<u> </u>	4.5.3
6.1.3 Procedure in place to maintain policy and procedure manuals current?	<u> </u>	<u> </u>	<u> </u>	
6.1.4 Procedure in place as required to assure consistency of policies and procedures between corporate and plant levels?	<u> </u>	<u> </u>	<u> </u>	
6.1.5 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	

Comments

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>	<u>Reference</u>
6.1.6 Assessment of Administrative Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant have an adequate general administrative policy and procedure system?

Comments

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

6.2 Checklist of Significant Control Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
6.2.1 Policies/procedures available to control the actions of key organizational components?	<u> </u>	<u> </u>	<u> </u>	4.5.4
6.2.2 Policies/procedures required for the use of performance standards for key organizational components?	<u> </u>	<u> </u>	<u> </u>	4.6.7
6.2.3 Provisions which specify who determines when changes to performance standards are necessary (other than changes mandated by regulation)?	<u> </u>	<u> </u>	<u> </u>	
6.2.4 Corporate components use performance standards?	<u> </u>	<u> </u>	<u> </u>	
6.2.5 Policies or procedures designed to keep nuclear related corporate staff informed of information related to the safe operation of the nuclear power plant?	<u> </u>	<u> </u>	<u> </u>	4.5.9
6.2.6 Policies/procedures available for evaluating possible departures from normal or desired operating conditions, and defining appropriate responses to such conditions?	<u> </u>	<u> </u>	<u> </u>	4.5.7
6.2.7 Audit/review system available to monitor compliance with internal policies/procedures?	<u> X </u>	<u> </u>	<u> </u>	4.5.12
6.2.8 Monitoring system available for determining all externally imposed requirements and for reporting these to responsible managers?	<u> X </u>	<u> </u>	<u> </u>	4.5.10
6.2.9 Monitoring system available for ascertaining compliance with all externally imposed requirements?	<u> X </u>	<u> </u>	<u> </u>	4.5.11

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
6.2.10	Key managers generally agree on communication provisions to keep management directly informed of key operations and problems?	_____	_____	_____	
6.2.11	Key managers generally agree on methods to control safety-related organizational components which are to be used to assure safe plant performance?	_____	_____	_____	
6.2.12	Key managers generally agree on descriptions of methods used to determine the current status of activities?	_____	_____	_____	
6.2.13	Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
			_____	_____	
			_____	_____	
			_____	_____	
			_____	_____	

Comments

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

	<u>Yes</u>	<u>Cond Yes</u>	<u>No</u>	<u>Reference</u>
6.2.14 Assessment of Control Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant have an adequate system of control?	_____	_____	_____	
<u>Comments</u>				

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

6.3 Checklist of Significant Integration/Coordination Items

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
6.3.1	Policy/procedure manuals readily accessible to applicable corporate staff?	___	___	___	4.5.4
6.3.2	Policies/procedures ensure communication among organizational components on safety-related tasks involving more than one unit?	___	___	___	4.5.5
6.3.3	Policies/procedures cover mechanism to share data within and across organizational components?	___	___	___	4.5.5; 4.5.8
6.3.4	Provisions included for information tracking systems immediately accessible to managers of all safety-related activities?	<u>X</u>	___	___	4.5.9
6.3.5	Policies/procedures to promote periodic interaction among appropriate managers?	___	___	___	
6.3.6	Policies/procedures designed to encourage exchange of technical information among managers and other employees?	___	___	___	4.5.8; 4.5.9
6.3.7	Key managers generally agree on descriptions of policies or procedures used to promote coordination across units?	___	___	___	
6.3.8	Key managers generally agree on major interfaces between their work and that of related organizational components?	___	___	___	
6.3.9	Key managers generally agree on the description of how the information systems for the utility, nuclear, and plant levels fit together into a consistent overall plan?	___	___	___	

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

6.3.10 Other Major Probes

Yes No Reference

Comments

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

	<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
6.3.11 Assessment of Coordination Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant have an adequate integration/coordination system?	_____	_____	_____	
<u>Comments</u>				

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

6.4 Checklist of Significant Improvement Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
6.4.1 Policies/procedures provide for periodic planning for performance improvements?	<u>X</u>	<u> </u>	<u> </u>	4.5.1
6.4.2 Feedback mechanisms for assessing performance improvements?	<u> </u>	<u> </u>	<u> </u>	4.5.2
6.4.3 Policies/procedures designed to solicit and evaluate suggestions from managers and employees outside of formal reporting channels?	<u> </u>	<u> </u>	<u> </u>	
6.4.4 Key managers generally agree on how longer-term performance improvements are achieved?	<u> </u>	<u> </u>	<u> </u>	
6.4.5 Key managers generally agree on the descriptions of systems for detecting and evaluating potential improvements in operations and safety?	<u> </u>	<u> </u>	<u> </u>	
6.4.6 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	

Comments

PROPOSED ADMINISTRATIVE POLICIES AND PROCEDURES

	<u>Yes</u>	Cond. <u>Yes</u>	<u>No</u>	<u>Reference</u>
6.4.7 Assessment of Improvement Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant have an adequate system for making longer-term improvements in their organization and administration procedures?

Comments

7.0 PROPOSED STAFFING

7.1 Checklist of Significant Administrative Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.1.1 Number of people assigned to major safety-related functions included?				
● General management (plant manager and above)	<u>X</u>	<u> </u>	<u> </u>	
● Operations	<u>X</u>	<u> </u>	<u> </u>	
● Maintenance	<u>X</u>	<u> </u>	<u> </u>	
● Radiological protection	<u>X</u>	<u> </u>	<u> </u>	
● Plant chemistry	<u>X</u>	<u> </u>	<u> </u>	
● Engineering	<u>X</u>	<u> </u>	<u> </u>	
● Training	<u>X</u>	<u> </u>	<u> </u>	
● Safety review	<u>X</u>	<u> </u>	<u> </u>	
● Quality assurance	<u>X</u>	<u> </u>	<u> </u>	
● Fire protection	<u>X</u>	<u> </u>	<u> </u>	
● Security	<u>X</u>	<u> </u>	<u> </u>	
7.1.2 Overall recruitment plan in place and consistent with functional needs?*	<u> </u>	<u> </u>	<u> </u>	

* This information should be obtained from the functional assessment worksheet contained in the attachments to the worksheets.

PROPOSED STAFFING

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.1.3	Skills, education, training and experience of key managers assigned to major safety-related functions submitted?*				4.6.1; 4.6.2
	• General management (plant manager and above)	<u>X</u>	<u> </u>	<u> </u>	
	• Operations	<u>X</u>	<u> </u>	<u> </u>	
	• Maintenance	<u>X</u>	<u> </u>	<u> </u>	
	• Radiological protection	<u>X</u>	<u> </u>	<u> </u>	
	• Plant chemistry	<u>X</u>	<u> </u>	<u> </u>	
	• Engineering	<u>X</u>	<u> </u>	<u> </u>	
	• Training	<u>X</u>	<u> </u>	<u> </u>	
	• Safety review	<u>X</u>	<u> </u>	<u> </u>	
	• Quality assurance	<u>X</u>	<u> </u>	<u> </u>	
	• Fire protection	<u>X</u>	<u> </u>	<u> </u>	
	• Security	<u>X</u>	<u> </u>	<u> </u>	
7.1.4	Resumes of key managers submitted?	<u> </u>	<u> </u>	<u> </u>	4.6.1; 4.6.2
7.1.5	Qualified staff available as backup in case of absence of key managers?	<u> </u>	<u> </u>	<u> </u>	4.4.18
7.1.6	Total number of people onsite included?	<u> </u>	<u> </u>	<u> </u>	
	Number <u> </u>				
7.1.7	Special staffing planned for fuel loading and start-up testing normal?	<u> X </u>	<u> </u>	<u> </u>	4.6.3

PROPOSED STAFFING

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.1.8 Planned use of contractor personnel to augment utility staff discussed?	<u>X</u>	<u> </u>	<u> </u>	
<p>If no contracted personnel planned, so state. If contractor usage is planned, indicate in which organizational components for possible follow-up probes:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>				
7.1.9 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
		<u> </u>	<u> </u>	
<u>Comments</u>				

PROPOSED STAFFING

	<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
7.1.10 Assessment of Administrative Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Is the administrative design of the staffing plan adequate?	_____	_____	_____	
<u>Comments</u>				

PROPOSED STAFFING

7.2 Checklist of Significant Control Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.2.1 Policy/procedure in place for use of formal performance appraisal system?	_____	_____	_____	4.6.7
7.2.2 Records indicate general conformance with performance appraisal policy/procedure?	_____	_____	_____	
7.2.3 Rewards/incentives system in place to encourage good staff conduct?	_____	_____	_____	4.6.3
7.2.4 Sanctions system in place to discourage inappropriate staff conduct?	_____	_____	_____	4.6.3
7.2.5 Responsibility for safety compliance clearly stated for key staff?	_____	_____	_____	4.6.6
7.2.6 Key managers agree on methods available for encouraging safe staff performance?	_____	_____	_____	
7.2.7 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		_____	_____	
		_____	_____	
		_____	_____	
		_____	_____	

Comments

PROPOSED STAFFING

		<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
7.2.8	Assessment of Control Items				
	Is the information complete?	___	___	___	
	Is there a rationale for the intended actions?	___	___	___	
	Are the intended actions achievable?	___	___	___	
	<u>Comments</u>				

Does the applicant have an adequate system to control staff conduct?

Comments

PROPOSED STAFFING

7.3 Checklist of Significant Coordination/Integration Items

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.3.1	System available to assure operations and maintenance review/concurrence with proposed plant design modifications?	_____	_____	_____	
7.3.2	Career path plans for key staff include horizontal moves to other functional areas?	_____	_____	_____	
7.3.3	Cross-training included in training programs for safety-related functional areas:				
	● Plant operation for all areas?	_____	_____	_____	4.6.8
	● Health physics for all areas?	_____	_____	_____	4.6.8
7.3.4	Ad hoc interdisciplinary teams of staff from appropriate functional areas used to address significant plant or plant related problems?	_____	_____	_____	
7.3.5	Staff that require frequent interaction located near each other?	_____	_____	_____	
7.3.6	Key managers understand approaches available to encourage staff coordination/interaction?	_____	_____	_____	
7.3.7	Staffing plan consistent with other NPPs in applicant's system including assurance of continued adequate staff support for those plants?	_____	_____	_____	
7.3.8	Systems used to control staff conduct consistent throughout the utility?	_____	_____	_____	

PROPOSED STAFFING

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.3.9	Systems used to encourage staff coordination/integration consistent throughout the utility?	_____	_____	_____	
7.3.10	Staff development planning consistent throughout the utility?	_____	_____	_____	
7.3.11	Key managers agree on why staffing system differences, if any, exist between proposed plant and rest of utility?	_____	_____	_____	
7.3.12	Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
			_____	_____	
			_____	_____	
			_____	_____	
			_____	_____	

Comments

PROPOSED STAFFING

	<u>Yes</u>	<u>Cond.</u> <u>Yes</u>	<u>No</u>	<u>Reference</u>
7.3.13 Assessment of Coordination Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	
<u>Comments</u>				

Does the applicant have an adequate system to control staff conduct?	_____	_____	_____	
<u>Comments</u>				

PROPOSED STAFFING

7.4 Checklist of Significant Improvement Items

	<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
7.4.1 Provisions to identify and develop personnel for positions of higher authority and responsibility including:				4.6.8
• Training	_____	_____	_____	
• Retraining	_____	_____	_____	
• Job transfer	_____	_____	_____	
• Temporary assignment	_____	_____	_____	
• Career Paths at Each Organizational Level	_____	_____	_____	
7.4.2 Provisions to involve key managers and staff in the start-up test program for training purposes?	_____	_____	_____	4.6.9
7.4.3 Other Major Probes		<u>Yes</u>	<u>No</u>	<u>Reference</u>
		_____	_____	
		_____	_____	
		_____	_____	
		_____	_____	

Comments

PROPOSED STAFFING

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>	<u>Reference</u>
7.4.4 Assessment of Improvement Items				
Is the information complete?	_____	_____	_____	
Is there a rationale for the intended actions?	_____	_____	_____	
Are the intended actions achievable?	_____	_____	_____	

Comments

Does the applicant's staffing system adequately encourage longer-term improvements?

Comments

8.1 Planned Use of Outside Resources

A-57

EXTERNAL RELATIONSHIPS

		<u>Req'd.</u>	<u>Yes</u>	<u>No</u>	<u>Reference</u>
8.1.3	Key managers understand plans for contractor support including transition plans?	___	___	___	
8.1.4	Description submitted of formal arrangements (including information exchange, reviews of plant operations, other activities) planned with external groups (e.g., INPO, EPRI, EEI reactor vender user groups, other utilities, etc.)?	<u>X</u>	___	___	4.7.4
8.1.5	System in place to obtain plant safety experience information from external sources?	___	___	___	4.7.4
8.1.6	System in place to provide plant safety experience information to external sources?	___	___	___	
8.1.7	Key managers agree on plans for sharing plant safety experience information with external sources?	___	___	___	
8.1.8	Key managers agree on how external information will be evaluated and disseminated internally?	___	___	___	
8.1.9	Planned use of contracted resources consistent with use at other NPPs in applicant's system? (State "not applicable" if there are no other NPPs.)	___	___	___	
8.1.10	Planned working relationships with external groups consistent with relationships established elsewhere in applicant's system?	___	___	___	

EXTERNAL RELATIONSHIPS

8.1.11 Other Major Probes

<u>Yes</u>	<u>No</u>	<u>Reference</u>
------------	-----------	------------------

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

_____	_____	
-------	-------	--

Comments

EXTERNAL RELATIONSHIPS

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>	<u>Reference</u>
8.1.12 Assessment of External Relationships				
Is the information complete?	___	___	___	
Is there a rationale for the intended actions?	___	___	___	
Are the intended actions achievable?	___	___	___	
<u>Comments</u>				

Is the applicant's plan for external relationships adequate for safe plant operation?	___	___	___	
<u>Comments</u>				

9.0 OVERALL SUMMARY

(Before filling out Section 9, refer to instructions in Section 3.7, pp. 12-15.)

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>
<u>9.1 Organization</u>			
9.1.1 Is the applicant's overall organization design adequate?	_____	_____	_____
9.1.2 Does the applicant's organization design adequately facilitate control of work?	_____	_____	_____
9.1.3 Does the applicant's organization design adequately facilitate coordination/integration of work?	_____	_____	_____
9.1.4 Does the applicant's organization design adequately facilitate longer-term improvements in safety-related activities?	_____	_____	_____
<u>9.2 Policies/Procedures</u>			
9.2.1 Does the applicant have an adequate general administrative policy and procedure system?	_____	_____	_____
9.2.2 Does the applicant have an adequate system of control?	_____	_____	_____
9.2.3 Does the applicant have an adequate integration/coordination system?	_____	_____	_____
9.2.4 Does the applicant have an adequate system for making longer-term improvements in the organization and administration practices?	_____	_____	_____
<u>9.3 Staffing</u>			
9.3.1 Is the applicant's staffing plan adequate?	_____	_____	_____
9.3.2 Does the applicant have an adequate system to control staff conduct?	_____	_____	_____

OVERALL SUMMARY

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>
9.3.3 Does the applicant's staffing system adequately encourage staff coordination/interaction important to safety?	_____	_____	_____
9.3.4 Does the applicant's staffing system adequately encourage longer-term improvements?	_____	_____	_____
9.4 <u>External Relationships</u>			
9.4.1 Is the applicant's planned use of contracted support resources adequate for longer-term safe plant operation?	_____	_____	_____
9.5 <u>Overall Management Plan Assessment</u>			
9.5.1 Is the applicant's overall control system adequate?	_____	_____	_____
9.5.2 Is the applicant's overall system for coordination adequate?	_____	_____	_____
9.5.3 Is the applicant's overall system for longer-term development adequate?	_____	_____	_____

Comments (Include summary of conditions which should be met if "Conditional Yes" box is checked)

OVERALL SUMMARY

	<u>Yes</u>	<u>Cond. Yes</u>	<u>No</u>
9.5.4 Is the applicant's overall OAP adequate?	_____	_____	_____

Comments (Include summary of conditions which should be met if
"Conditional Yes" box is checked)

NUREG/CR-4125
PNL-5374
BHARC-300/85/002
VOL. 2
REV. 1
RX

DISTRIBUTION

OFFSITE

U.S. Nuclear Regulatory Commission
Division of Technical Information and
Document Control
7920 Norfolk Avenue
Bethesda, MD 20014

20 Peter McLaughlin
Division of Human Factors Safety
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Station AR-5200
Washington, D.C. 20555

ONSITE

Pacific Northwest Laboratory

2 R.D. Widrig
1 R.V. Badalamente
2 Publishing Coordination
5 Technical Information

Human Affairs Research Centers

25 J.A. Thurber
10 J. Olson
1 R.N. Osborn
1 P.E. Sommers
1 W.L. Rankin
2 HARC Central Report File/B. Keen