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 AUTH. NAME AUTHOR AFFILIATION
 CRANE, P.A. Pacific Gas & Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Forwards updated description of util corporate structure, reflecting establishment of nuclear power generation dept & of onsite safety review group & mgt oversight group for incorporation into FSAR.

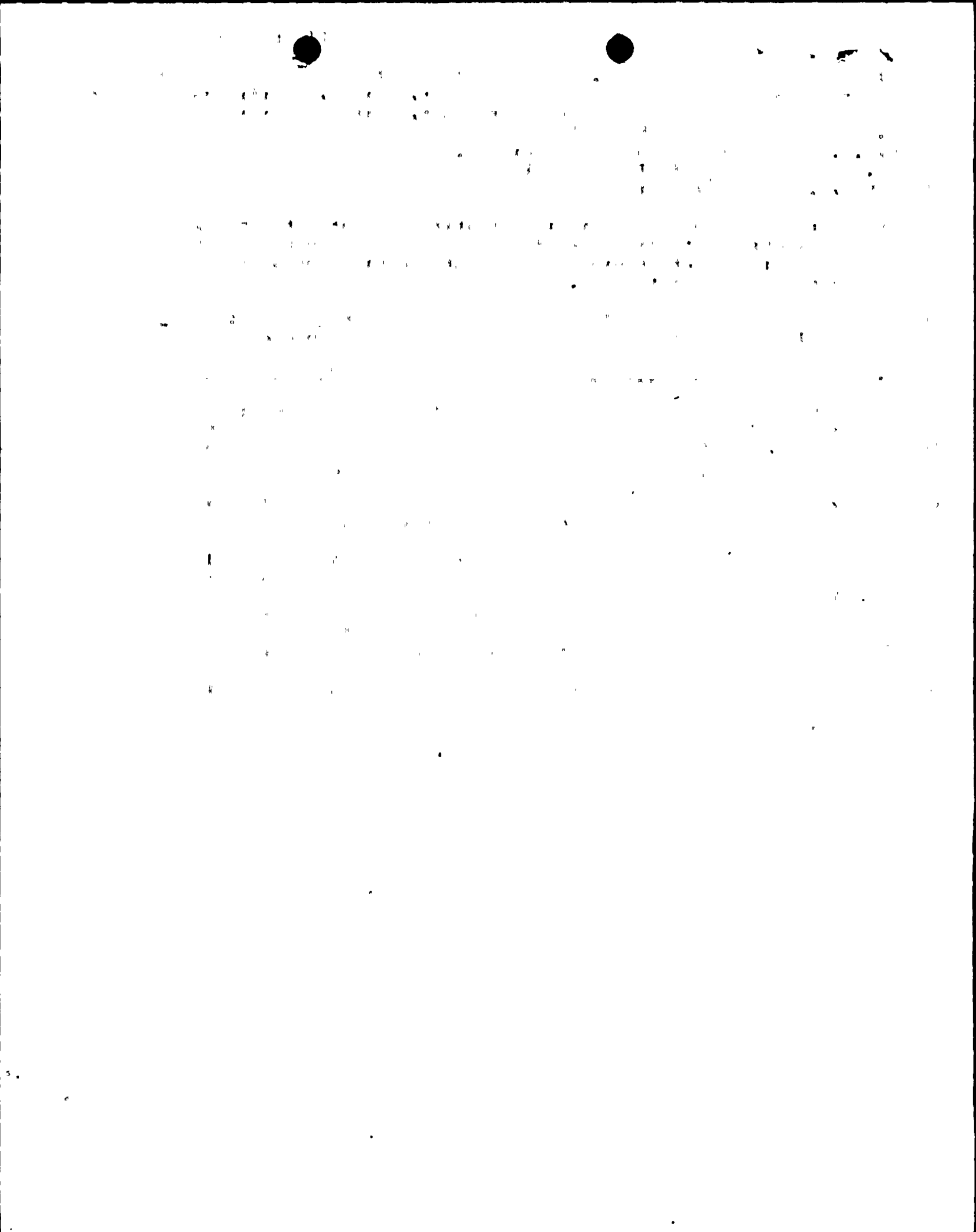
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Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

June 9, 1980

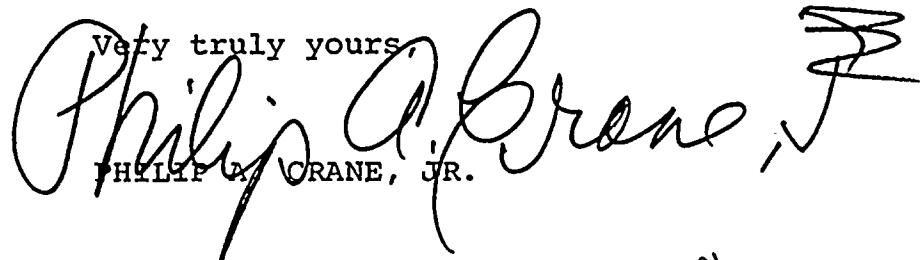
Re: Docket No. 50-275
Docket No. 50-323
Diablo Canyon Units 1 and 2

Dear Mr. Schwencer:

Attached for the Staff's review is an updated description of PG&E's corporate structure, reflecting the establishment of the Nuclear Power Generation Department and the resulting reorganization. Also attached is a description of the Onsite Safety Review Group, the Management Oversight Group, and Diablo Canyon Plant Staffing and Shift Manning.

This information will be incorporated into Chapters 13 and 17 of the Diablo Canyon FSAR.

Very truly yours,

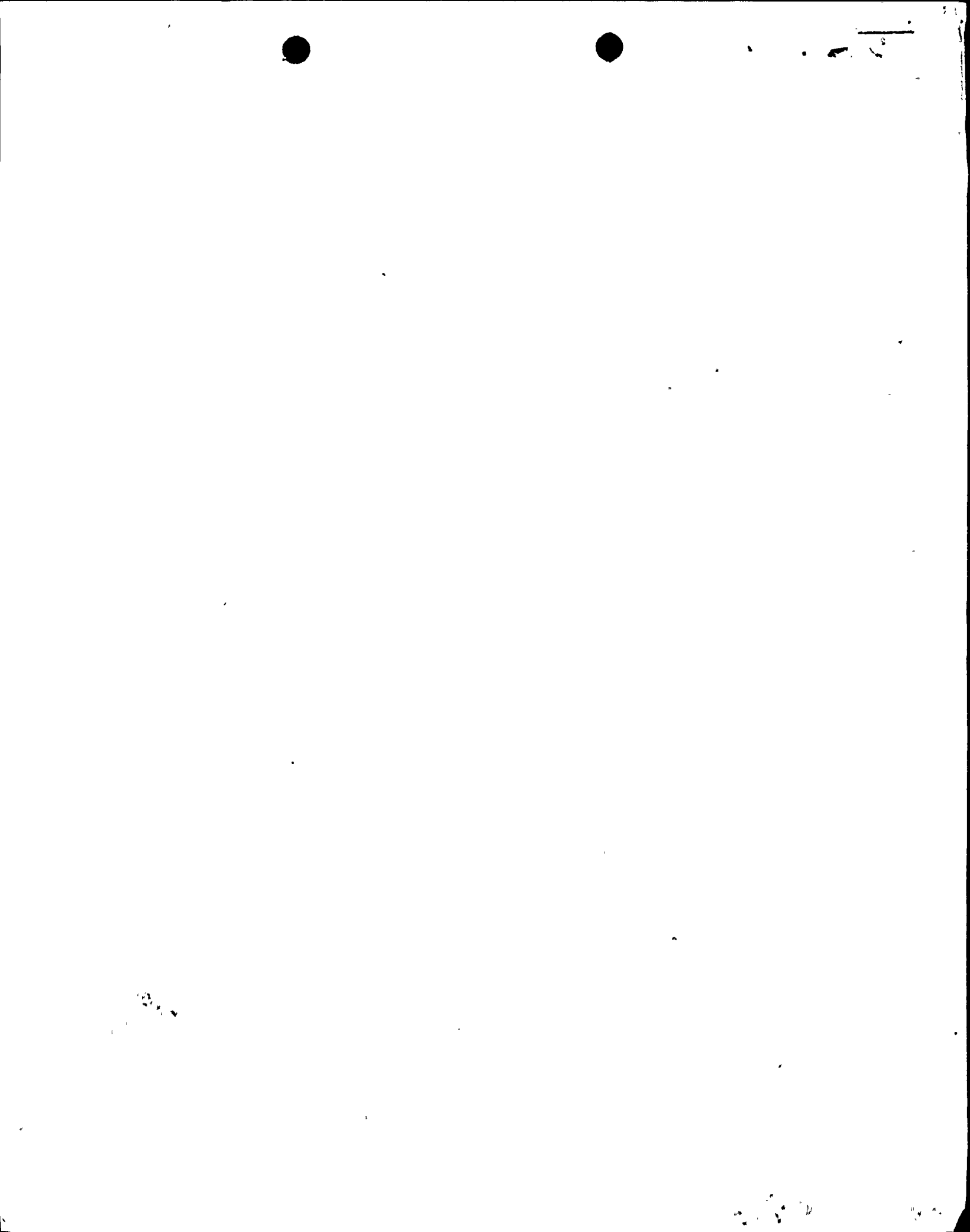

PHILIP A. CRANE, JR.

Attachments (5)

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ORGANIZATION AND RESPONSIBILITIES
ON-SITE SAFETY REVIEW GROUP
DIABLO CANYON POWER PLANT

INTRODUCTION

The Onsite Safety Review Group (OSRG) is an onsite organization assigned the responsibility of performing an ongoing, systematic and independent review of plant activities. The primary functions of the group include: review and evaluation of the technical adequacy of procedures important to safe operation; review and evaluation of design changes and modifications; and evaluation and assessment of the plant's operating experience and performance as related to nuclear safety.

ORGANIZATION

The OSRG is made up of five technical persons, assigned to the plant site, and drawn from the three Nuclear Power Generation departments as follows:

Nuclear Generation Engineer -- Nuclear Plant Operations

Nuclear Generation Engineer -- Nuclear Plant Operations

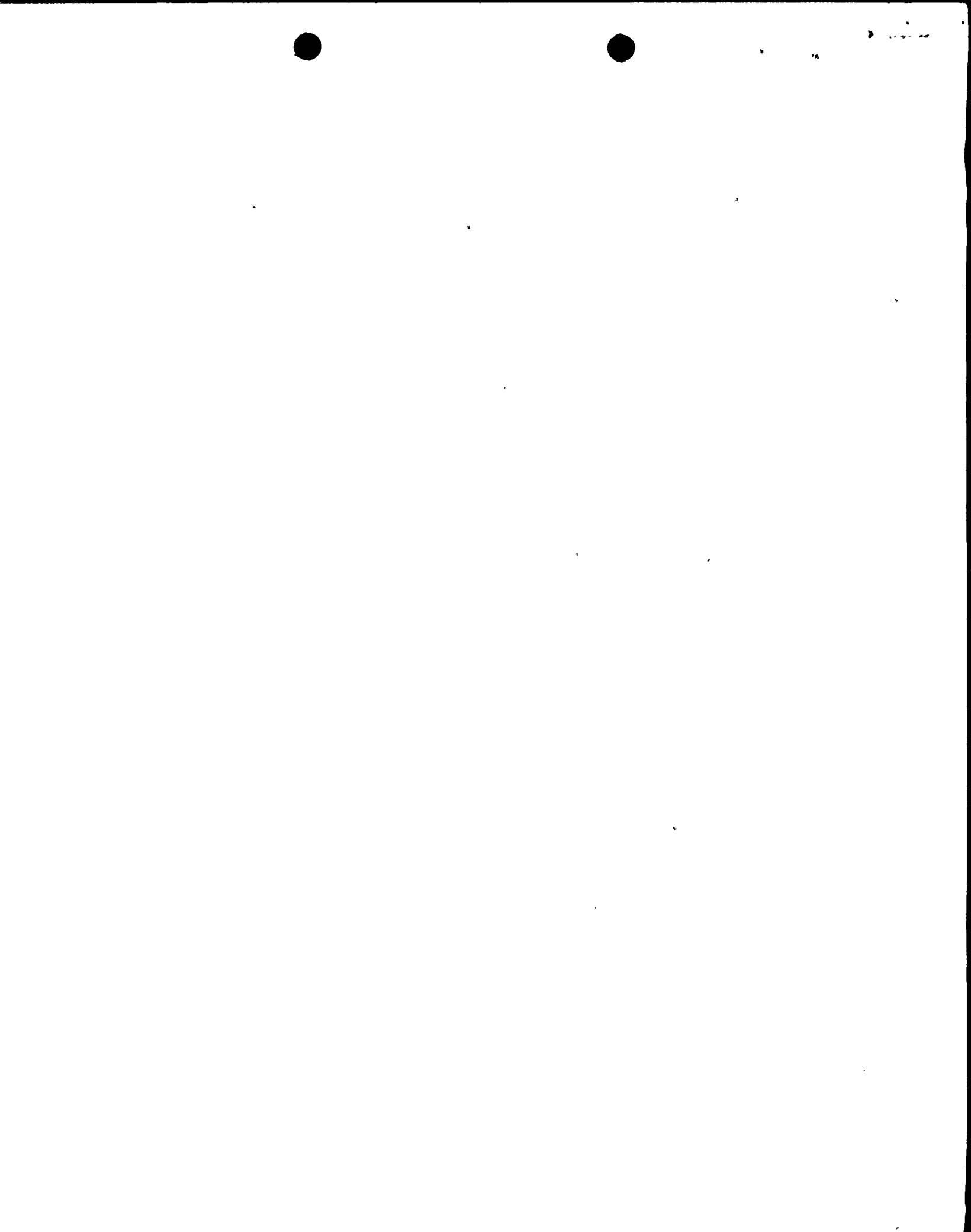
Shift Engineer (STA) -- Nuclear Plant Operations (Plant Staff)

Quality Assurance Supervisor -- Quality Assurance

Nuclear Engineer -- Nuclear Projects

Collectively, the OSRG shall have (as a minimum) expertise in the areas of nuclear engineering, nuclear plant operations, radiation protection, plant mechanical and electrical systems, instrumentation and controls, and quality assurance. In areas where special expertise is required, such as chemistry, radiochemistry and metallurgy, the OSRG is expected to request appropriate support from Company departments if such expertise is not contained on the OSRG itself.

One of the group members will be designated as group leader responsible for administrative supervision of the group. The group reports offsite to the Manager, Nuclear Projects. Individual group members interface with, and receive functional direction from their respective General Office departmental organizations.



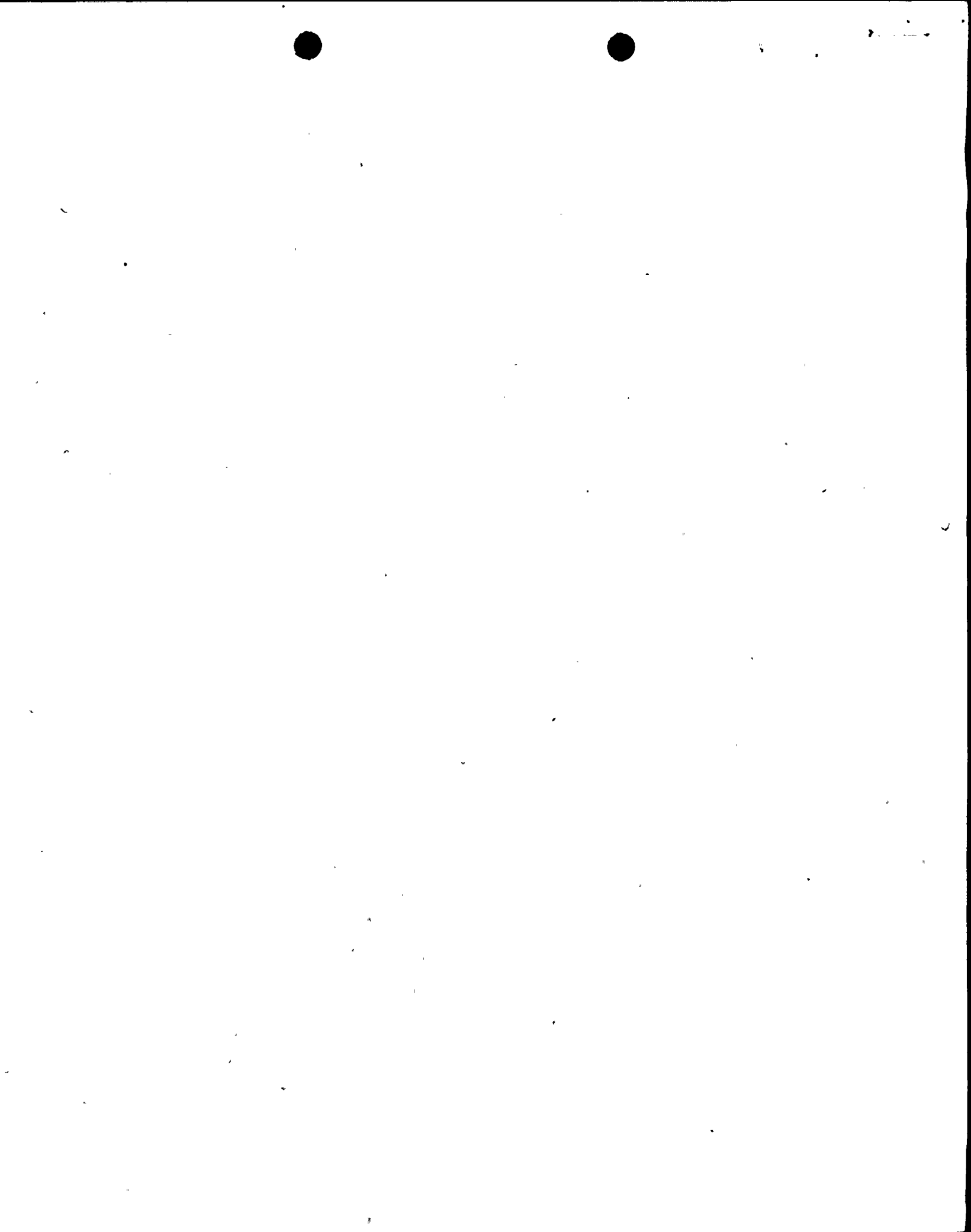
and one Records Management Supervisor. One Senior Engineer is responsible for auditing, which includes scheduling and organizing audits, making evaluations, and recommending and followup on corrective actions. He also supervises the resident auditing staff at Diablo Canyon Plant. A second is responsible for program development and training, which includes preparation of quality assurance manuals, along with procedure development and review. A third is responsible for undertaking special projects. The Records Management Supervisor is responsible for the records management system which includes a computer-based system for storing and retrieving drawings and records associated with the design, construction and operations of Humboldt Bay and Diablo Canyon.

The Quality Assurance Department currently has a staff of 26 with an authorized level of 29.

Nuclear Projects

John B. Hoch is the Manager of Nuclear Projects. He has reporting to him one Supervising and four Senior Engineers. The Supervising Engineer is responsible for project control, which includes preparation of schedules and a computer-based commitment control system for listing and tracking all items which need to be completed. The commitment control system is one of the main efforts in assuring the timely completion of design and construction. One Senior Engineer is responsible for project administration which includes the areas of costs, correspondence control and distribution, and quality control. A second Senior Engineer is responsible for the technical aspects of NRC licensing which includes almost daily contact with NRC staff members, submittal preparation and public hearing support. A third Senior Engineer is responsible for design coordination which includes directing and coordinating group leaders from each discipline within the Engineering Department. In addition, he is presently directing an extensive systems interaction investigation. A fourth Senior Engineer is responsible for the geologic investigations and engineering support for Humboldt Bay.

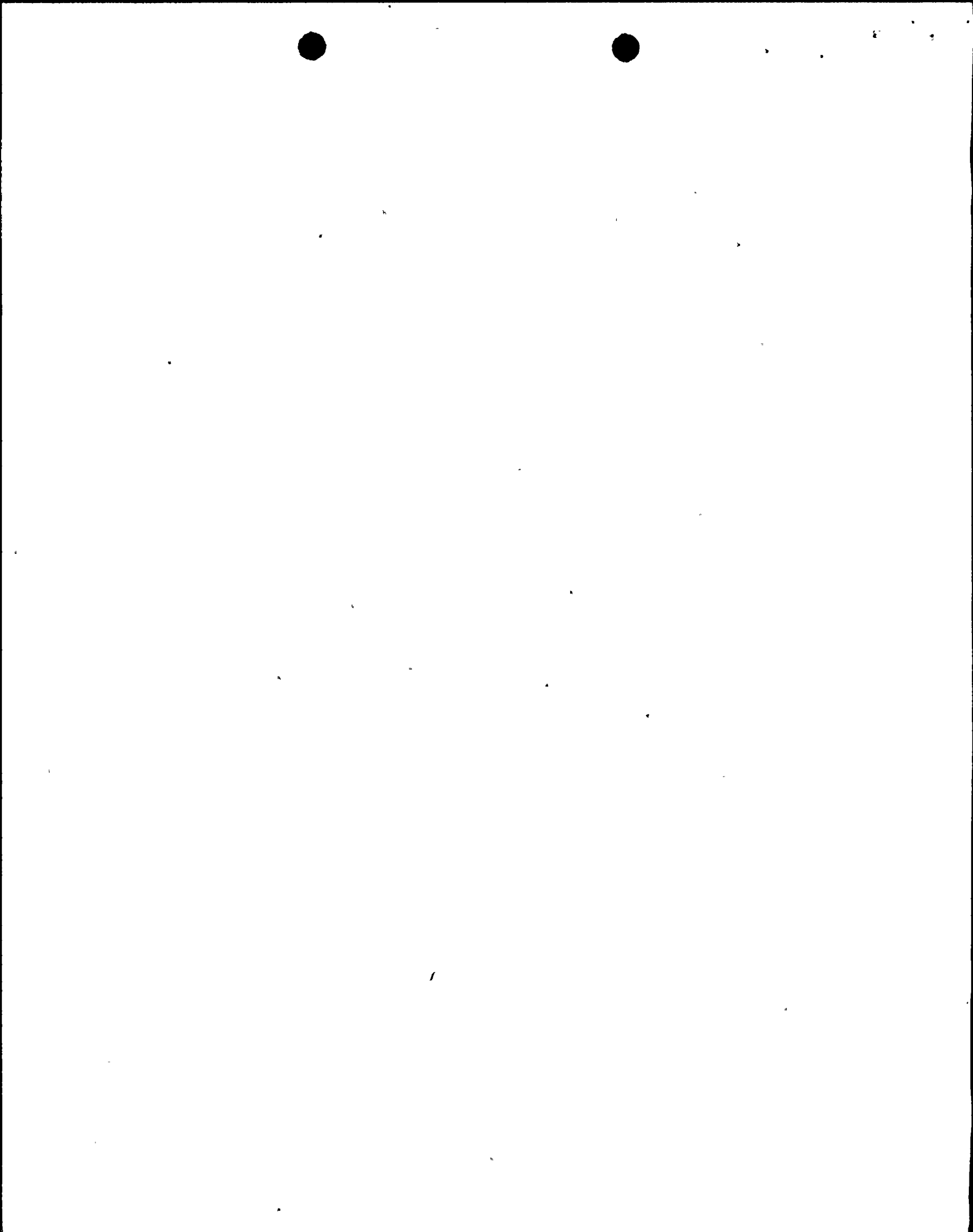
The Department of Nuclear Projects presently has a staff of 21 permanent people. A permanent staff of about 26 people is planned.

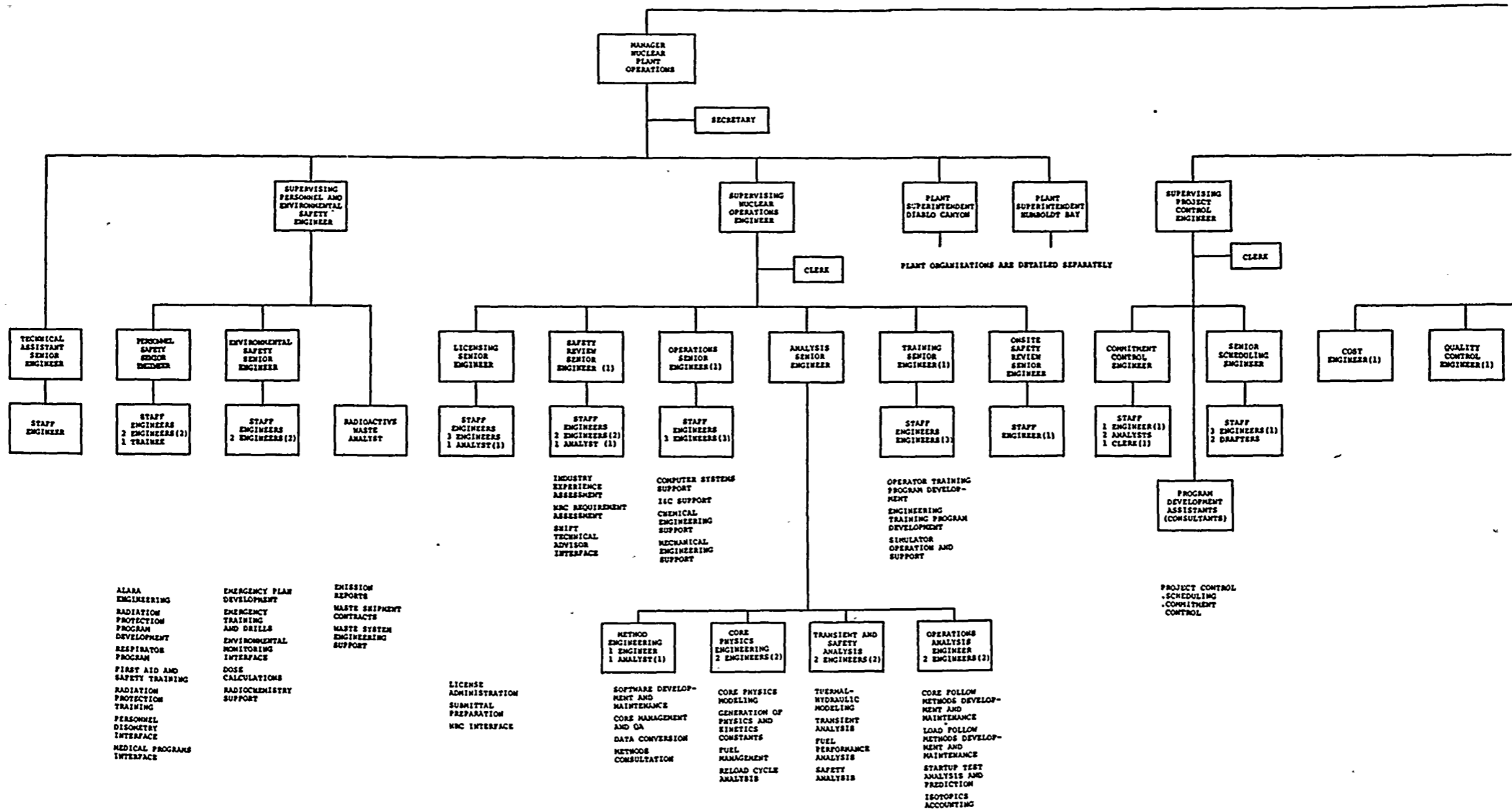


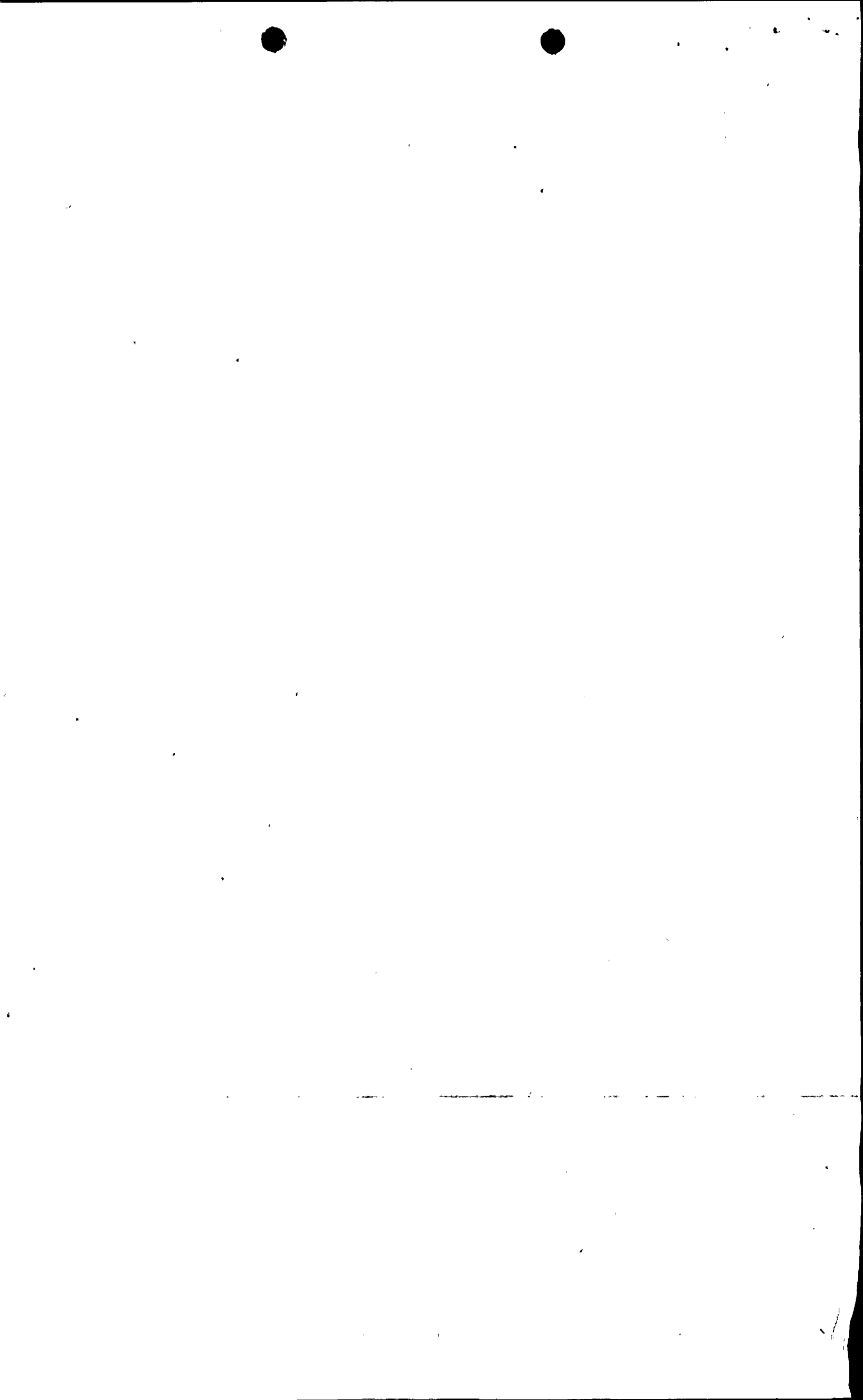
Technical Assistant

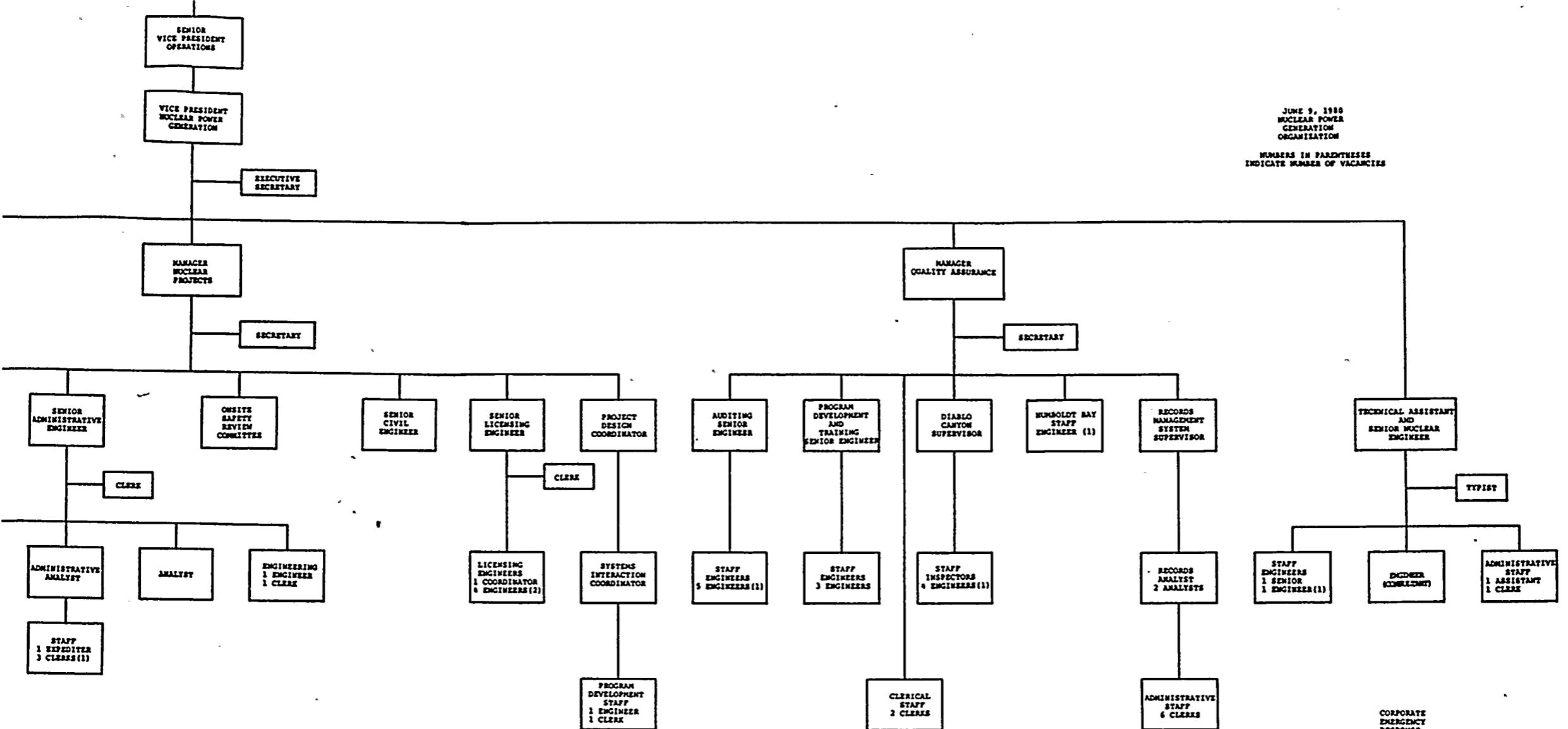
Steven M. Skidmore is the Technical Assistant to the Vice President, Nuclear Power Generation. Mr. Skidmore, a Senior Nuclear Engineer, has reporting to him one Senior Engineer, two staff Engineers and clerical staff. He is responsible for developing and maintaining both the Corporate Emergency Response Plan and implementing procedures, and the Nuclear Power Generation Department Manual. Additional responsibilities include Corporate nuclear power training and professional development, public relations technical support, nuclear strategic planning, management audit action plan (nuclear), and shielding analysis.

The Technical Assistant currently has a staff of 5 with an anticipated level of 7.









PROJECT ADMINISTRATION
 . COSTS
 . CORRESPONDENCE AND FILES CONTROL
 . QUALITY CONTROL

HUMBOLDT BAY
 . GEOLOGIC INVESTIGATIONS
 . ENGINEERING SUPPORT

NRC LICENSING
 . DAILY CONTACT
 . SUBMITTAL PREPARATION
 . HEARING SUPPORT

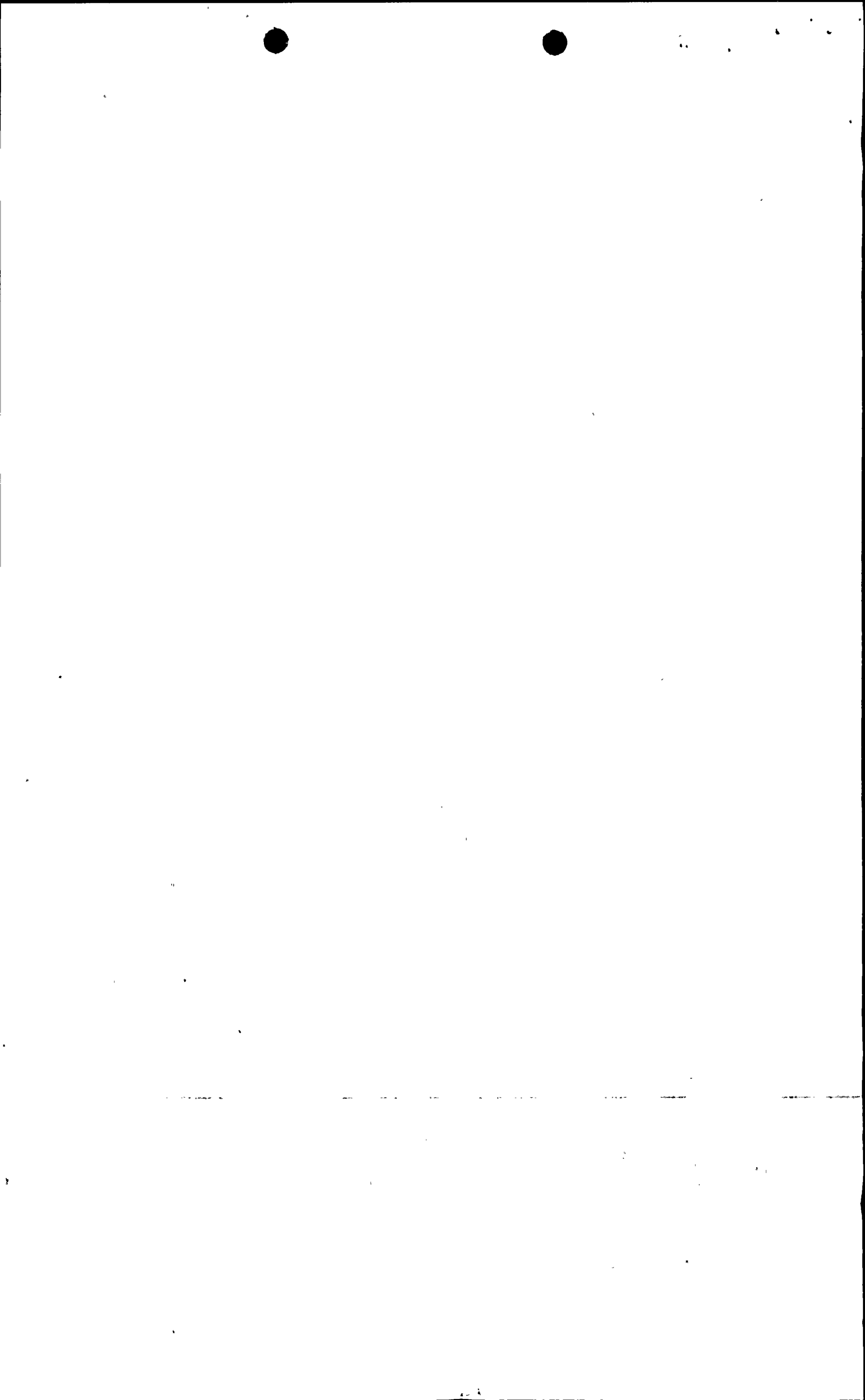
DESIGN COORDINATION
 . GROUP LEADERS
 . SYSTEMS INTERACTION PROGRAM

AUDITING
 . SCHEDULE AND ORGANIZE
 . EVALUATIONS
 . CORRECTIVE ACTION
 . RESIDENT AUDITORS

PROGRAM DEVELOPMENT AND TRAINING
 . QUALITY ASSURANCE MANUALS
 . PROCEDURES DEVELOPMENT AND REVIEW
 . TRAINING PROGRAMS

RECORDS MANAGEMENT
 . DEVELOPMENT
 . IMPLEMENTATION
 . TRAINING

CORPORATE EMERGENCY RESPONSE PLAN
 . DEVELOP
 . MAINTAIN
 NUCLEAR POWER GENERATION MANUAL
 . DEVELOP
 . MAINTAIN
 CORPORATE NUCLEAR POWER TRAINING AND PROFESSIONAL DEVELOPMENT
 PUBLIC RELATIONS TECHNICAL SUPPORT
 MANAGEMENT AUDIT ACTION PLAN (NUCLEAR)
 STRATEGIC PLANNING (NUCLEAR)
 SHIELDING ANALYSIS



The organizational structure of the OSRG was established after consideration of the following factors:

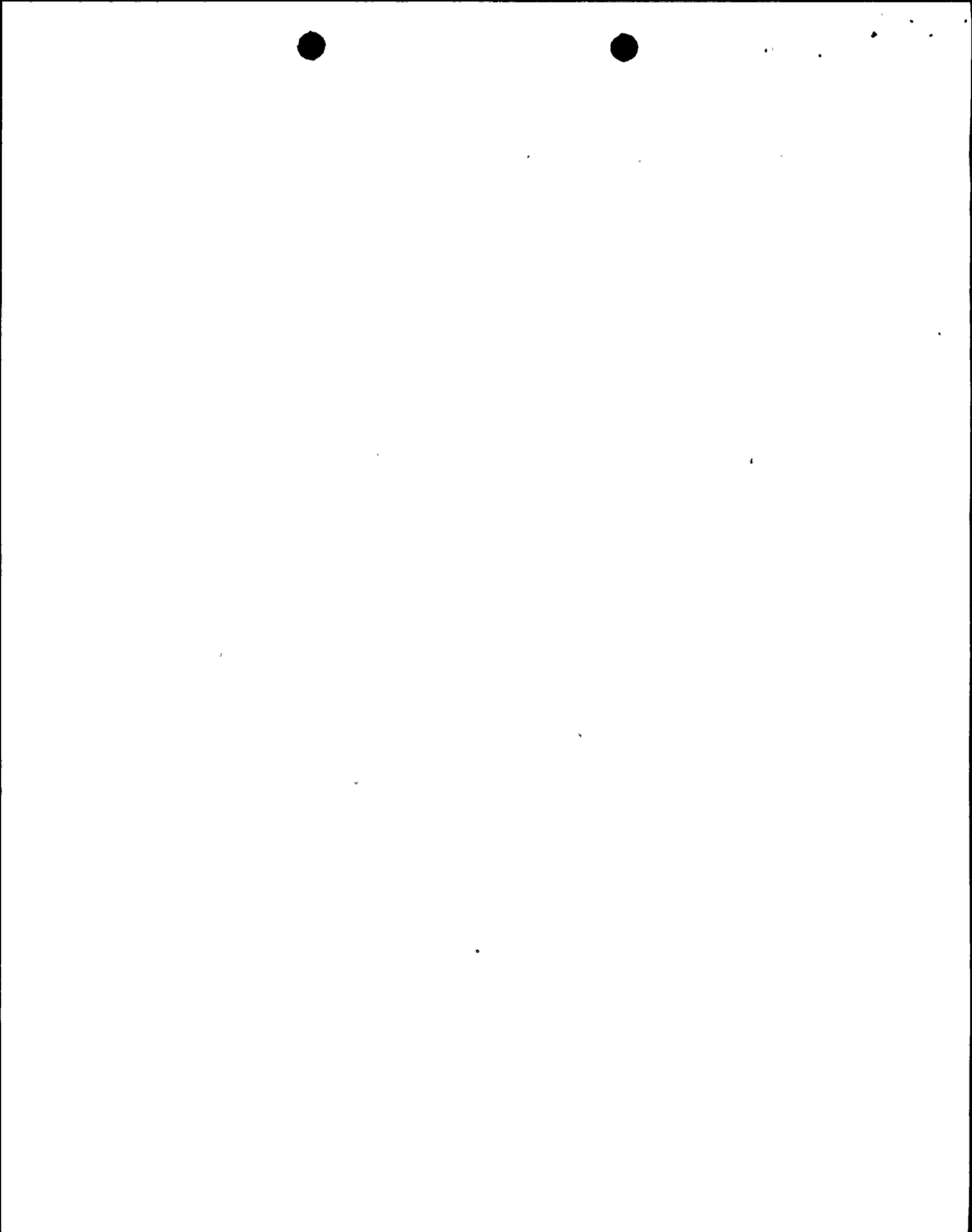
1. The reporting path for the OSRG was established to assure independence of the group from corporate management having line authority over the plant staff.
2. Providing representation on the OSRG from each department in Nuclear Power Generation offers several advantages, including:
 - a. This arrangement provides additional assurance of OSRG independence. With dialogue between individual members and their respective organizations, all managers are independently made aware of OSRG activities and can provide input to the OSRG.
 - b. This arrangement substantially increases the technical resources and information available to the OSRG, thereby working to enhance the quality of the review effort they can perform. This is best illustrated by several examples:
 - 1) One source of information which needs to be available to the OSRG are the current licensing issues, since these are related in many cases to generic industry problems. Both Nuclear Plant Operations and Nuclear Projects have licensing groups (the former dealing primarily with operational matters, the latter dealing primarily with design matters); therefore, it is appropriate that both departments be represented.
 - 2) The nuclear analysis and training expertise in Nuclear Power Generation is largely contained within Nuclear Plant Operations. In depth review of operating and emergency procedures will frequently require these resources be utilized. For example, determination of optimum emergency strategies for emergency procedures may require that numerous core calculations be made, or that procedures be tested on a simulator. These resources are available to the OSRG through Nuclear Plant Operations.
 - c. Company representation and interfaces with industry groups, such as NSSS supplier owners groups, EPRI, EEI, come from all three departments. To assure reliable flow of information from these groups to the OSRG, it is desirable that all three departments be represented on the OSRG.



3. It is recognized that proper functioning of the OSRG can only be obtained through free communication with members of the plant staff. It is similarly recognized, however, that unnecessary duplication of independent review efforts could detract from plant operations by distracting key members of the plant staff from their duties for inordinate periods of time. Therefore, it is expected that the OSRG will coordinate its review efforts with other "independent" reviewers to optimize this process. In particular, the Quality Assurance Department has the principal responsibility for independent review of the onsite quality assurance program, although this is also a responsibility of the OSRG. Inclusion of a member of the Quality Assurance Department on the OSRG enhances the coordination of these efforts. Similarly, Nuclear Plant Operations is ultimately responsible for all onsite activities, and in fulfilling these responsibilities the Manager has established General Office groups to independently (from the plant staff) review various operational programs.

It should be emphasized that this coordination is intended to be with other "independent" reviewers. It is expected that the independent program conducted by the OSRG and other organizations will essentially duplicate much of the work of the Plant Staff Review Committee.

4. Inclusion of representatives of Nuclear Plant Operations on the OSRG is expected to lessen the time lag in implementing recommended changes due to the more direct access these representatives have to the department Manager. A similar argument can be made for having representatives from the other departments on the OSRG, since it is anticipated that the OSRG will also identify areas in the design process (largely a Nuclear Projects function) and quality assurance programs which require alteration.
5. Inclusion of the Shift Engineer (STA) on the OSRG enhances both the flow of information on plant practices to the OSRG, but also the rapid flow of OSRG recommendations to the shift crews. Ordinarily, the Shift Engineer on the day shift will be the individual who is actually functioning on the OSRG, although the Shift Engineers on the other shifts may be utilized to review activities on the other shifts.



6. Having representatives from all departments on the OSRG enhances the possibility of rotational assignments, which could be a valuable tool to maximize the expertise of the OSRG membership.
7. The relative numbers of members from the various departments on the OSRG is based upon the expected review workload in each area, rather than any implication of relative importance.

The members of the OSRG will have offices at the plant, which will be their normal work location. Although it is intended that members will be onsite during regular working hours, it is fully recognized that their safety review assignments and responsibilities may require them to spend time offsite. An effort will be made to have at least one group member other than the Shift Engineer onsite during day shift on Monday through Friday. In general, approximately 80% of the group's work hours are expected to be onsite. This goal will be reevaluated as experience is gained.

RESPONSIBILITIES

1. The general review functions of the OSRG include:
 - a. Evaluation for technical adequacy and clarify all procedures important to the safe operation of the plant.
 - b. Evaluation of plant operations from a safety perspective.
 - c. Evaluation of the effectiveness of the onsite quality assurance program.
 - d. Evaluation of the operating experience of the plant and plants of similar design.
 - e. Overall assessment of the plant staff performance regarding their conformance of requirements related to safety.
 - f. Assessment of plant safety programs.
 - g. Any other matter involving the safe operation of the nuclear power plant that an independent reviewer deems appropriate for consideration.
2. The OSRG is not responsible for sign-off functions such that it becomes involved in the operating organization.

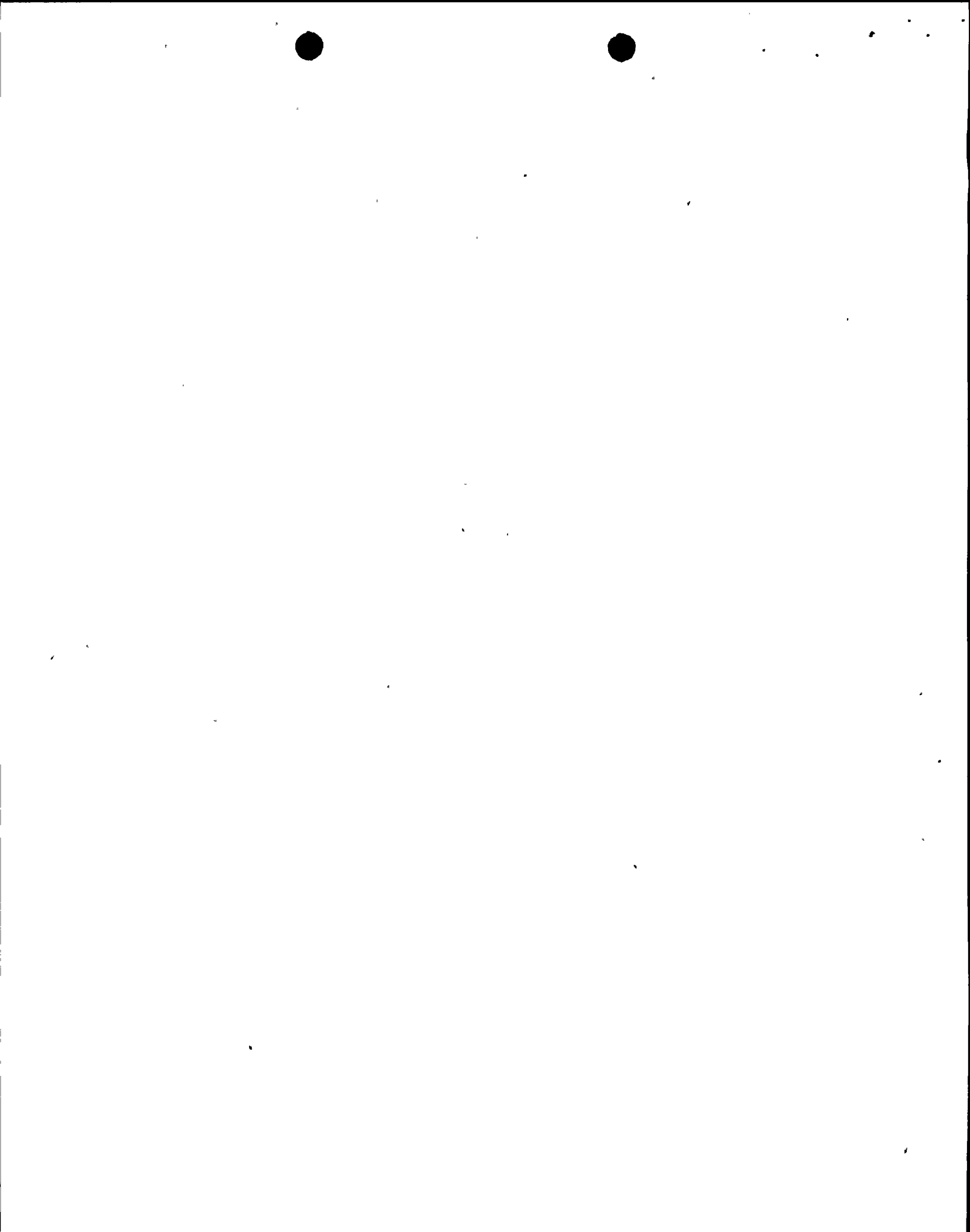


ORGANIZATION AND RESPONSIBILITIES
ON-SITE SAFETY REVIEW GROUP
DIABLO CANYON POWER PLANT

-5-

REPORTS

The OSRG shall prepare written summaries of reviews and evaluations performed as noted above. These summaries shall include the results of, and recommendations resulting from such reviews and evaluations. Monthly reports containing a summary of work completed and recommendations made shall be prepared and forwarded to the Manager, Nuclear Projects, with information copies to all departments in Nuclear Power Generation.



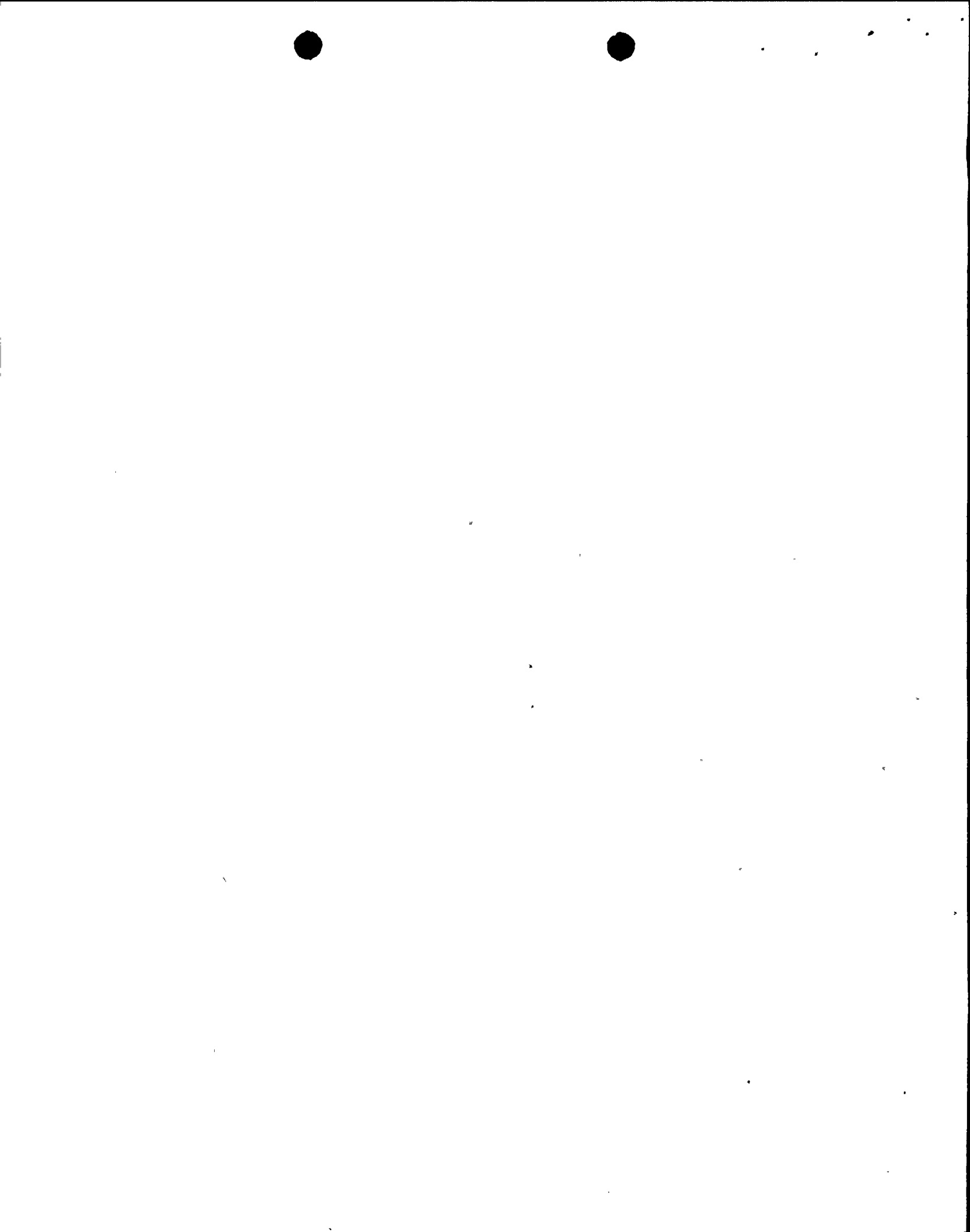
MANAGEMENT OVERSIGHT GROUPS

The Vice President, Nuclear Power Generation, his three department managers (Nuclear Plant Operations, Quality Assurance, and Nuclear Projects) and his Technical Assistant meet once a week to discuss the ongoing Diablo Canyon activities. Once a month, this weekly meeting will be devoted to Diablo Canyon safety considerations to assure that safety issues are being effectively applied to the plant's operational activities. As a minimum, the monthly meeting will:

- . Provide oversight to activities performed by the Onsite Safety Review Group and other review groups.
- . Review corrective actions and recommendations of the Onsite Safety Review Group and other review groups.
- . Assure, as appropriate, that corrective actions and recommendations of the Onsite Safety Review Group and other review groups are effectively implemented.

The President's Nuclear Advisory Committee (PNAC) will meet, at least quarterly, to advise the President of the results of reviews of the activities associated with the design, construction, and operation of nuclear power plants and make recommendations to the President on items requiring his attention.

- . The PNAC membership will consist of:
 - Senior Vice President - Operations (Chairman)
 - Vice President, Engineering
 - Vice President, General Construction
 - Vice President, Nuclear Power Generation
 - Manager, Safety, Health and Claims Department



STAFFING AND SHIFT MANNING
DIABLO CANYON POWER PLANT

INTRODUCTION

The latest NRC requirements for shift manning during the startup testing program require four licensed operators (2 SOL, 2 OL) per shift in operating modes 1, 2, 3, or 4 and two licensed operators (1 SOL, 1 OL) during cold shutdown. In addition, the NRC requires that restrictions on operator overtime be observed, such that scheduled shifts be 12 hours or less (with a 12-hour break between shifts) and the work week be no more than 72 hours. Finally, the NRC requires that the use of licensed management and training personnel in fulfilling these requirements be minimized.

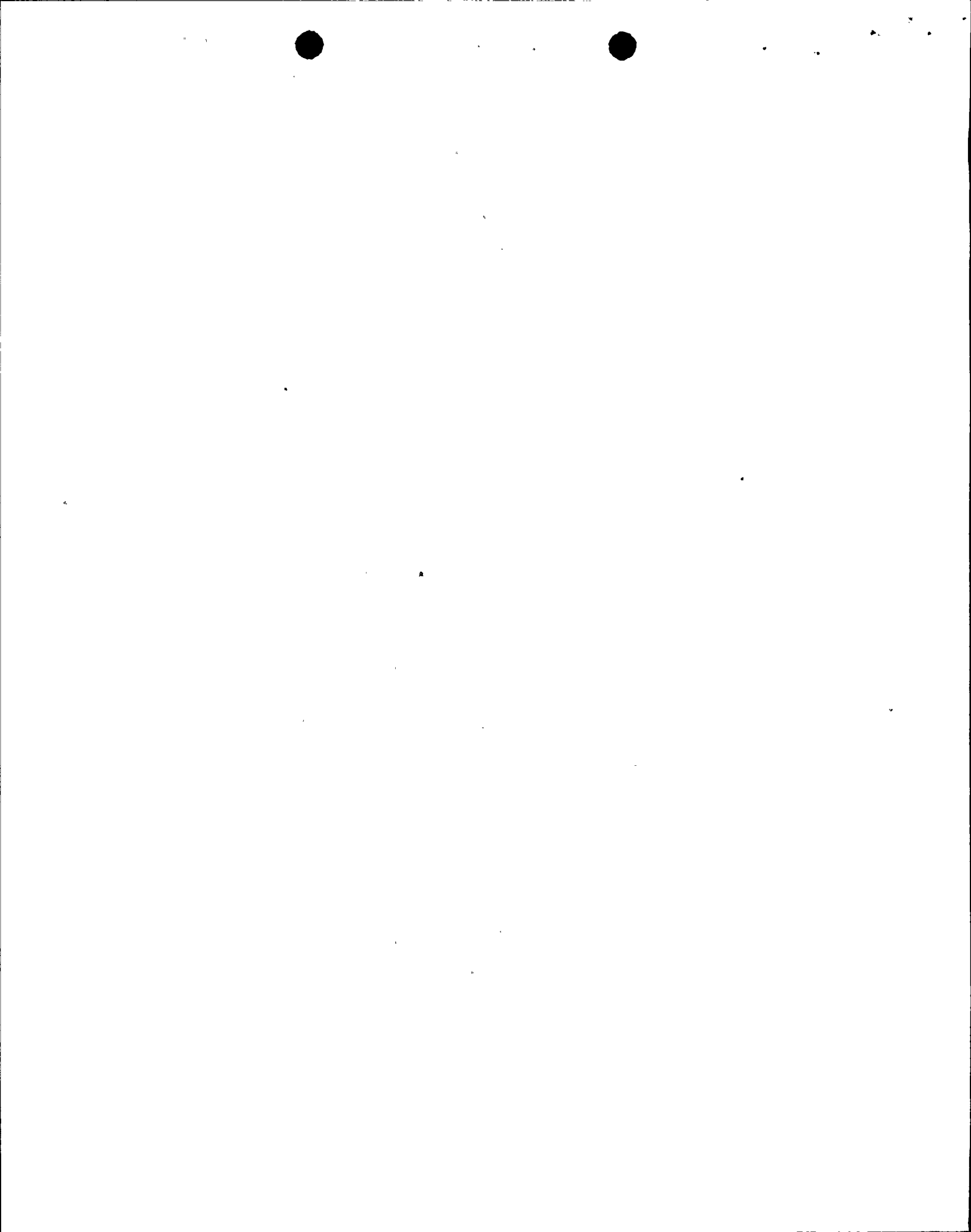
The Company currently has 21 candidates who are qualified by experience and training to take the cold license examination. Of these, three (the Plant Superintendent, Power Plant Engineer, and Supervisor of Operations) are considered as management personnel, and two others are in the training organization. The NRC has also informed the Company that the current examination failure rate is approximately 30% (i.e., 6 persons). Thus, if one assumes 6 persons fail and no credit is taken for 5 others who have management and training responsibilities, this would result in 10 persons with cold licenses who could be used without qualification (except for overtime restrictions) until the plant reaches 20% power and the hot license candidates are eligible to sit for their licenses. While 10 licensed persons are sufficient to maintain the plant in cold shutdown, it is marginal for the purpose of low power testing. However, there are several alternative courses of action which can be taken to alleviate this situation, which are discussed in the following section.

DISCUSSION OF ALTERNATIVES

In order to alleviate the potential situation discussed above, the Company has several alternatives which are or will be employed as required. These include:

1. Schedule Testing to Minimize Required Total Number of Licensed Personnel

By performing tests in groups, interspersed with periods of cold shutdown, it is possible to reduce the total number of licensed personnel required, while meeting shift coverage and overtime requirements. For example, the program could be conducted over an extended period with



twelve licensed persons if testing were performed around the clock on Monday through Thursday, with cold shutdown maintained on Friday through Sunday. To illustrate, consider two teams of four licensed operators who work 12-hour shifts during testing (i.e., each man works 48 hours/week), with two teams of two licensed operators who work 12-hour shifts during cold shutdown (i.e., each man works 36 hours/week).

Scheduling tests in order to minimize the total number of persons required will be used as warranted.

2. Improve the Pass/Fail Ratio

Of the 21 candidates for a cold license, eighteen will apply for Senior Operator and three will apply for Operator licenses. This extraordinarily high ratio of Senior to Operator licenses substantially exceeds the ratio required for shift coverage.

Furthermore, with our experienced cold license candidates (14 have held NRC licenses on BWR's) and the extensive and lengthy training programs they have completed (most have been previously examined by the NRC on Diablo Canyon on up to three occasions), including use of the Zion simulator, we expect a pass/failure ratio somewhat better than the 70% currently being reported. We also have an advantage, with the high SOL/OL ratio, that should any of our SOL candidates fail at that licensing level, it is highly likely they will be licensable at the OL level.

3. Supplement the Management and Training Staffs

It is the Company's intention that management and training personnel will only be used to satisfy shift manning requirements when it is clearly in their interest to participate in the test or operation being performed. Any circumstance requiring deviation from this rule will require the approval of the Plant Manager.

The Company firmly believes it is important for management people to actively participate, to the extent that it does not significantly detract from their other responsibilities, in the startup and initial operation of a new unit.



This experience will be of great value to them in supervising the activities of others and will certainly enhance the safe operation of the plant. No conflict will be allowed with the Plant Staff Review Committee responsibilities of the above three management employees.

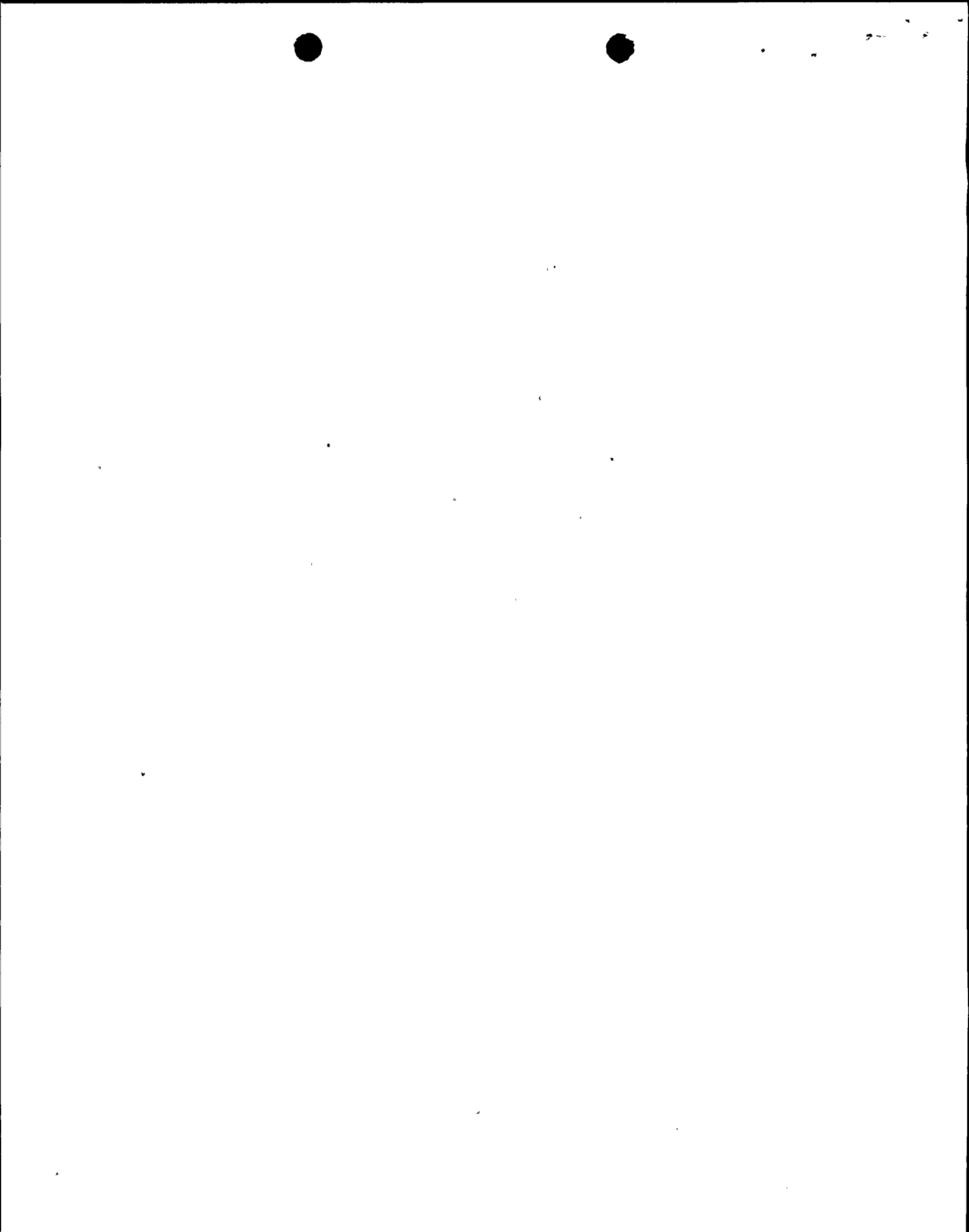
The training supervisors are primarily involved in the cold license program, which will be concluded by the time of fuel loading. Their participation will not be allowed to adversely impact on the plant training and requalification programs. As an added measure, a training specialist has been retained to lead the hot license program. He formerly was a certified instructor with Westinghouse at the Zion Training Center. When the startup program has progressed to the point where the hot license candidates can be licensed, any need for these personnel to periodically satisfy shift staffing requirements will vanish altogether.

However, if required, the Company at its General Office in San Francisco has a minimum of six management and supervisory people who have extensive nuclear and/or Diablo Canyon experience, and who could be brought to the site to relieve the licensed plant supervisors of many routine administrative duties.

4. Increase the Number of Cold License Candidates

There are presently 23 hot license candidates at Diablo Canyon. Of this group, 20 are operators and 3 are supervisory personnel. The operators have been assigned to Diablo Canyon for periods ranging from 2-1/2 to 7 years. All participated in extensive preoperational and hot functional testing of the plant. Of the 20 operators, 7 have extensive nuclear navy experience; 11 have conventional plant experience ranging from one year up to seventeen years. All the operator candidates have participated in a comprehensive classroom training program. The extent of this program varies with the length of time at the site; however, the average is in excess of 750 classroom lecture hours. It should be noted that this figure does not include study time or on-the-job training.

The Company has made arrangements to assign 15 of these hot license candidates to the Westinghouse Nuclear Training Center to participate in a Phase II and III program. This program starts July 7, 1980 and will be concluded approximately November 21, 1980. The goal of this program is cold license

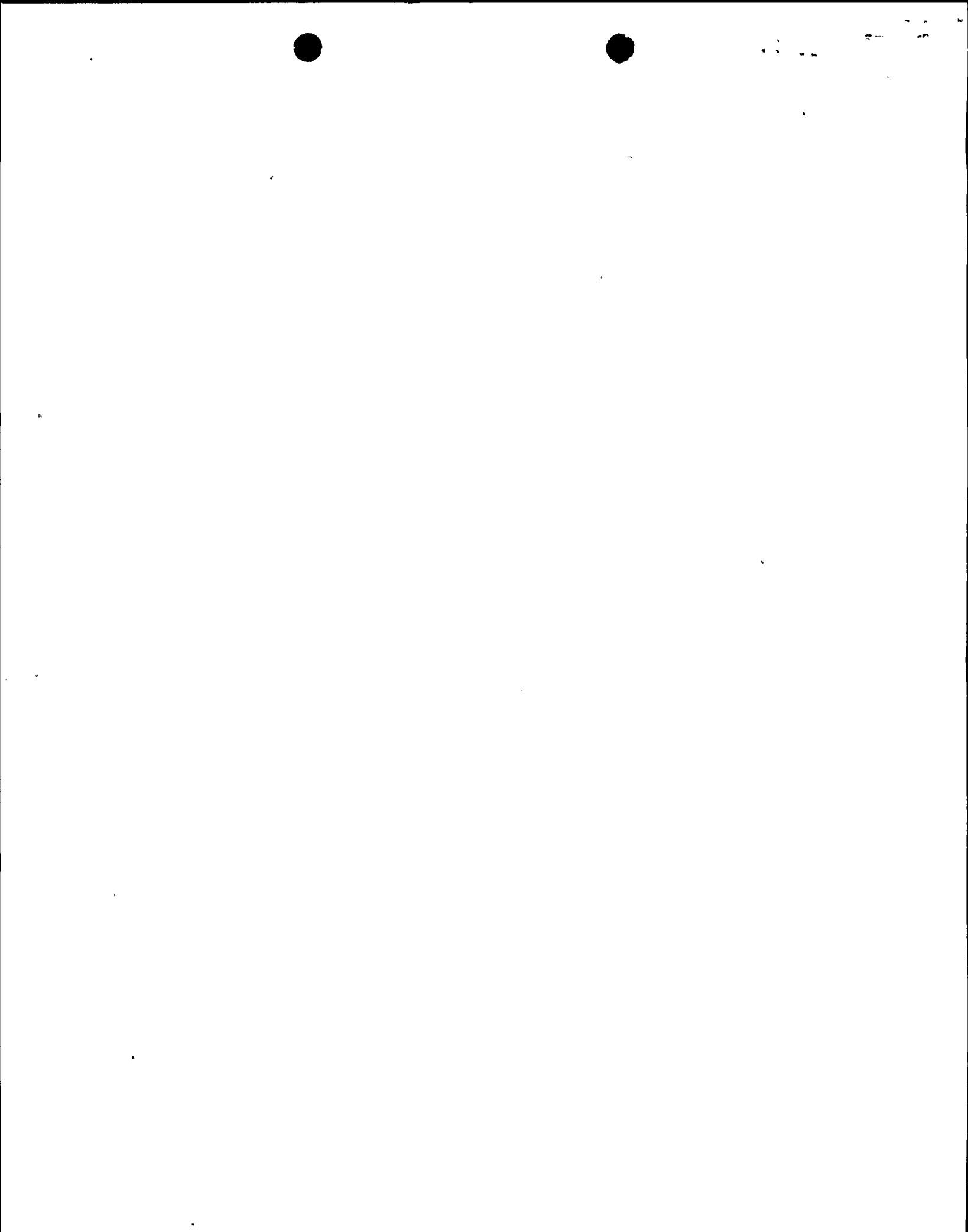


certification for these 15 candidates. Following this program, these operators will receive approximately two months of site-specific retraining at Diablo Canyon and will be ready to take the NRC cold license examination February 1, 1981.

5. Additional Shift Coverage

In addition to the normal plant shift coverage, consisting of operators and their supervisors, the Company has made the following arrangements to further enhance the safe and efficient startup of the Diablo Canyon units.

- a. Shift Technical Advisors (STA) (Shift Engineers) - Six graduate engineers with relevant experience have been hired and are presently enrolled in a 26-week Westinghouse training program designed for this relatively new classification. The course includes simulator training in operation and accident response plus training at the Westinghouse headquarters with accident analysis engineers.
- b. The Company, as its own A&E, has a construction department which includes a Startup Engineering Group that has had the responsibility for the pre-operational test program. This group of engineers, under the direction of the Resident Startup Engineer, is responsible for preparation of the startup program and has a good understanding of the design and operation of plant equipment. They will be assigned shifts during the startup testing and initial operation of the units.
- c. In addition, Westinghouse has been contracted to provide NSSS Startup Engineers for continuous shift coverage during startup and power escalation. Westinghouse is also to provide Senior Nuclear Testing Advisors (Physicists) for continuous shift coverage beginning with zero power physics testing. Additionally, Westinghouse Chemistry, Instrument and Control and Moisture Carryover specialists will be onsite and will follow the startup.
- d. As its own A&E, the Company has a large and experienced group of engineers and operations people in the Corporate headquarters, some of who will be assigned to the site periodically to observe and advise on the progress of the startup.



CONCLUSION

We believe that the number of cold license candidates originally proposed by the Company is adequate, considering the flexibility which is available in the scheduling of both personnel and testing, to assure a safe and efficient startup program in accordance with all applicable requirements. However, as added assurance that any extraordinary measures will be of short duration, the Company has made provisions for the certification of many additional cold license candidates, who will be available in early 1981.

