

ATTACHMENT TO P-85066

PUBLIC SERVICE COMPANY OF COLORADO

ACTION PLAN

To Address The Recommendations Of
NUS Operating Services Corporation's
Report Entitled

"An Analysis And Evaluation Of The Management Of
Nuclear-Related Activities Of The
Public Service Company Of Colorado"

January 30, 1985

February 28, 1985

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Introduction to Action Plan

Public Service Company of Colorado contracted with NUS Operating Services Corporation for an independent assessment of all aspects of Fort St. Vrain-related management.

NUS delivered a report ("An Analysis and Evaluation of the Management of Nuclear-Related Activities of the Public Service Company of Colorado" dated January 30, 1985) in fulfillment of this contract.

In a letter to the NRC dated January 2, 1985, Public Service Company stated that an Action Plan addressing the recommendations of the consultant's report would be completed 30 days after receipt of the NUS report.

This Action Plan was prepared by Public Service Company in compliance with that commitment.

The NUS report, which entailed approximately 2500 man-hours of labor with over 60 Public Service Company people being interviewed, covered the following major subjects:

- A. Conduct of Operations/Management
- B. Work Control systems/Procedures
- C. Commitment Control
- D. Training/Retraining
- E. Organization/Staffing

Each subject was organized into three sections:

- Introduction
- Observations
- Recommendations

In developing the Action Plan, Public Service Company adopted the general format of first stating each NUS recommendation and then following it with Public Service Company's response to that recommendation.

The reorganization that occurred in the Fall of 1984 is being strengthened by other pending changes which are discussed in Section E of the Action Plan. For convenience, they are summarized below and graphically depicted in Figure 1 (attached):

- * The Vice President, Electric Production will report directly to the President and Chief Executive Officer, Public Service Company of Colorado.
- * A new position of General Manager, Fossil Production will be created to consolidate all fossil production activities under one manager.

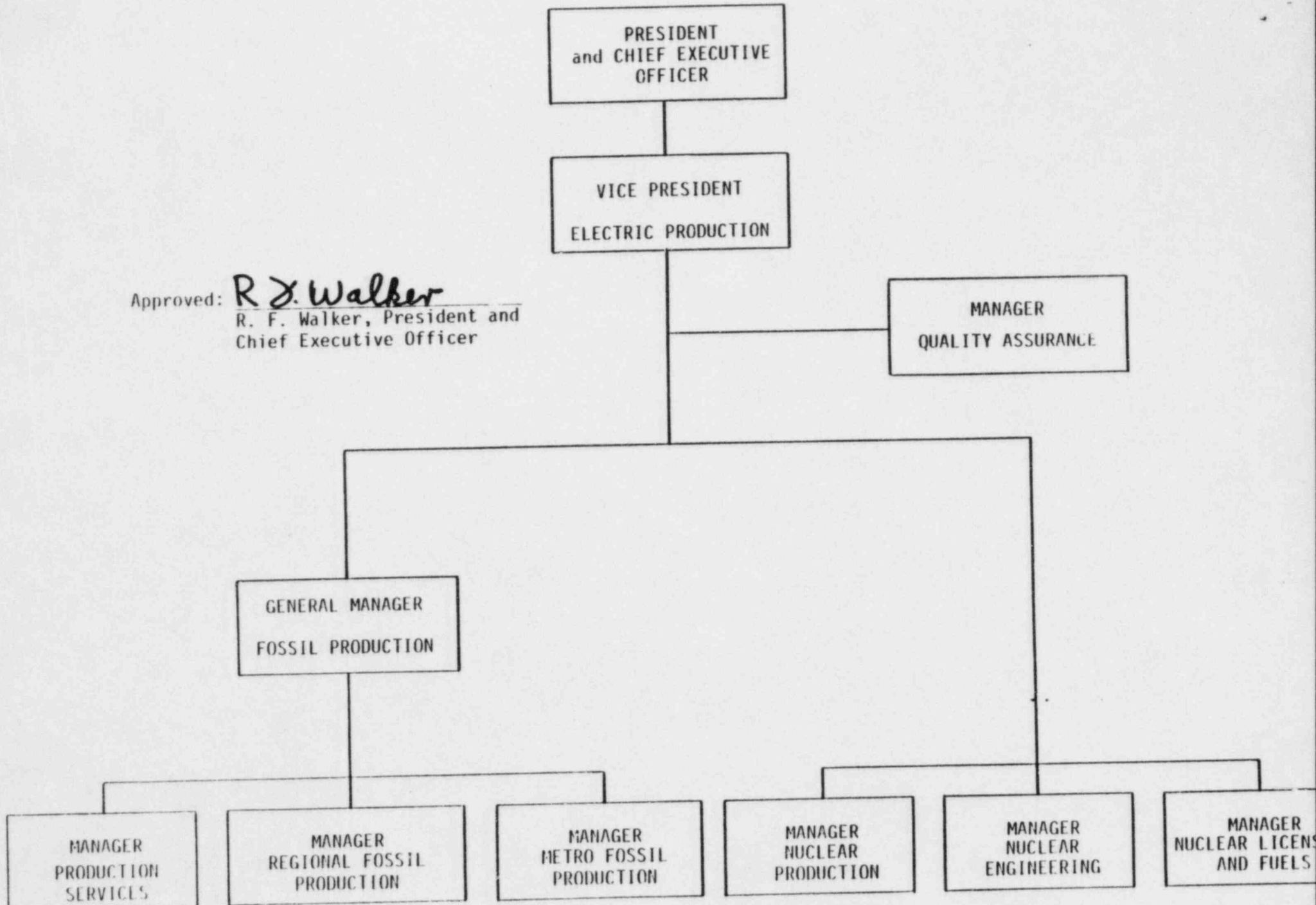
- * In order to clarify the position of Executive Staff Assistant, it will be renamed Manager, Nuclear Licensing and Fuels Division. As an added responsibility, this organization will provide a senior management communication link to the NRC.

- * A broad scope study is in progress to determine how several new functions should be structured within the nuclear organization. One of the new functions will be responsible for implementing the Action Plan and coordinating the associated organizational interfaces. Another new function will be responsible for directing the Performance Enhancement Program once it is established. There will also be a master nuclear planning and scheduling function created to monitor and coordinate external commitments and inter-divisional internal commitments.

On the following pages will be found the full text of each of the 34 NUS recommendations together with Public Service Company's responses.

The Performance Enhancement Program, of which the Action Plan is an introductory element, will be used to strengthen Public Service Company's overall conduct of operations. By stressing improved coordination and resource utilization, the Performance Enhancement Program will provide the proper management control to accomplish this objective.

This Action Plan constitutes a first-phase response to the NUS report. On March 31, 1985, the Action Plan will be reissued with amplified responses for those recommendations which do not have the notation "no further action required".



Approved: R. F. Walker
 R. F. Walker, President and
 Chief Executive Officer

PUBLIC SERVICE COMPANY OF COLORADO
 FIGURE 1

NUS Recommendation A.1: Mission and Function Statements

The PSC nuclear organization should require that detailed mission and function statements (charters) be developed for each senior manager's group. These statements should be reviewed and agreed upon by the appropriate senior manager and then approved by the senior nuclear executive. The statements should be developed in such a manner as to be able to serve as guidance for the development of similar statements at the departmental and supervisory level. The statements, after approval, should become part of the nuclear policies and procedures manual for the senior nuclear executive.

PSC Response to Recommendation A.1

Each division will develop a charter of its operation which includes the mission statement of the division and each unit within that division. Mission and function statements for each nuclear organizational component will be completed as soon as practicable.

Several elements of this recommendation already exist in various Fort St. Vrain documents and PSC will rework them as necessary.

- (1) Administrative Procedure APM Q-1 describes the organizational responsibilities associated with the administration of the Fort St. Vrain Generating Station. This document contains relevant organizational charts and generalized statements summarizing executive level responsibilities and those of major organizational units such as the Nuclear Production Division, the Nuclear Engineering Division, the Nuclear Licensing and Fuels Division, and the Quality Assurance Division. Included are statements of responsibility for each management/supervisory position associated with these divisions.
- (2) Section XII (Conduct of Operations) of the Updated Final Safety Analysis Report contains statements of responsibility for each of the management/supervisory positions associated with the major nuclear organizations. As these statements are more detailed than those in Administrative Procedure APM Q-1, they are currently being reworked.
- (3) Appendix B.5 (Quality Assurance Program for Plant Operation) of the Updated Final Safety Analysis Report contains statements of responsibility for each of the management/supervisory positions associated with the major nuclear organizations. The statements are virtually identical to those in Administrative Procedure APM Q-1 except for their special emphasis upon quality assurance-related responsibilities.
- (4) FAR-1 (Nuclear Fuel Management Program - Functions, Assignments and Responsibilities) identifies each of the major activities which constitute the Nuclear Fuel

Management Program and the functional interactions of PSC organizational units and external companies that perform these activities. Covering fuel engineering and design, material procurement, segment fabrication, refueling, in-core fuel management, spent fuel handling and shipping, etc., it uses matrix-type charts to identify the role of the various organizations participating in the Nuclear Fuel Management Program.

- (5) Position Information Questionnaires, which have been prepared for all PSC employee positions, contain detailed statements of functional responsibilities for the individual positions. With some rework, these documents will form the basis for position responsibilities as defined in the Nuclear Policies and Guidelines Manual.

The existing Nuclear Policies and Guidelines Manual, will be reviewed and revised as necessary to incorporate requirements for organizational changes and changes in position responsibilities.

NUS Recommendation A.2: Management Planning System

The PSC nuclear organization should develop and implement an effective management planning system that encompasses the following basic elements:

- * Define the overall management objectives (results to be achieved) for the conduct of nuclear activities.
- * Identify the work that must be accomplished in order to achieve the objectives (referred to as critical performance areas).
- * Group and assign work responsibilities to individual organizational units within the nuclear organization.
- * Select critical objectives for each manager and prepare detailed and measurable action plans for achieving each of the critical objectives.

PSC Response to Recommendation A.2

PSC's current Corporate Operating Plans contain Management's goals and objectives. The individual management performance evaluations address specific attainment of these goals and objectives.

PSC recognizes that the nuclear organization would benefit from a long-range planning system that features distinct scheduling milestones and management-by-objectives criteria. In furtherance of this recognition, the Vice President, Electric Production, will establish a master nuclear planning and scheduling function. This function will address external commitments and interdivisional commitments, by utilizing an overall management planning system. The management planning system will incorporate state of the art planning and scheduling techniques for the identification, coordinating, and monitoring of individual task-specific functions and the relationships between the separate functions and the overall objectives of the nuclear organization.

NUS Recommendation A.3: Management Skills Program

The PSC nuclear organization should implement a management skills development program.

PSC Response to Recommendation A.3

PSC currently has a corporate succession planning program which identifies candidates for particular positions and the required accompanying managerial skills necessary to fill those positions. This program was identified by INPO as a "Good Practice". In addition, INPO requested PSC's President and Chief Executive Officer to present a paper at the INPO CEO workshop for other utilities to be made aware of this program.

PSC recognizes the importance of having managers and supervisory personnel aware of corporate policies and the need to have such policies applied to situations on a uniform basis. PSC currently utilizes a program for managerial skills development for supervisory, department/divisional, and executive levels.

A Management Skills Program will be completed containing the following elements:

- (1.) Production of a policy statement indicating the level of training that all key members of the nuclear organization will be expected to undertake and the time frames for completion of such activities.
- (2.) Identification of specific training requirements for all management/supervisory personnel. Executive and divisional level management in the nuclear organization will participate in an assessment program to determine, on an individual basis, the management skills that need improvement.
- (3.) Incorporation of the nuclear organization's policy within the training program to ensure that management directives are imparted to existing personnel.

NUS Recommendation A.4: Annual and Long Range Schedules

The nuclear organization should develop and maintain a program of annual and long-range schedules. The scheduling program should include, as a minimum, planned plant modifications, plant surveillances requiring shutdown, major maintenance activities, and plant outages.

PSC Response to Recommendation A.4

PSC is in the process of improving the scheduling and planning efforts for maintenance and outages/modifications.

The following progress has been made to date:

- (1) The Power Plant Maintenance Information System (PPMIS) has been implemented at Fort St. Vrain. This system provides extensive capabilities for identifying, assigning, tracking, and trending maintenance activities. As part of the implementation process, major completed activities include:
 - * Station Service Request (SSR) processing has been formalized via a Level I procedure which identifies specific responsibilities for maintenance activities, the flow of work and documentation, and the minimum requirements for "Quality Record" documentation.
 - * Procedures which support or are associated with the PPMIS/SSR program have been revised.
 - * Nuclear Production Division superintendents and supervisors, either directly or indirectly associated with maintenance activities, have been trained to meet the new requirements. Unit level personnel associated with maintenance work or documentation of such work have also been trained.
 - * A system for prioritization of SSR's has been developed and implemented. The criteria for prioritization has been defined and provided to personnel involved in this activity.
 - * Listings of outstanding work have been developed and are supplied to appropriate supervision/management.
 - * The previously existing backlog of maintenance work (which was tracked manually) has been converted to the recently implemented computer-based PPMIS system.
- (2) Specific directives have been defined for the Scheduling/Stores organization:

- * Responsibilities and authorities have been identified. Consequences of failing to meet these expectations have been defined.
 - * Priority attention is being given to corrective actions which have been identified but not yet resolved, such as outstanding audit findings from the NRC, the NFSC, and PSC QA.
- (3) A coordinating committee has been established for current and future outages under the chairmanship of the Station Manager.

This committee is charged with the following tasks:

- * Key individuals from Scheduling, Maintenance, I & C, Operations, Technical Services, Nuclear Engineering, Nuclear Licensing, and Quality Assurance are members. A professional consultant is currently being utilized for scheduling.
 - * The scope of work for outages will be defined by the Scheduling Department under the direction of the Station Manager.
 - * A computer-based Critical Path Method Scheduling program will be used to schedule outage activities.
 - * Work activities will be prioritized to identify available work windows, manpower loading, modification documentation requirements, and material requirements.
 - * Specific individuals with specific coordinating responsibilities have been identified for the current outage.
 - * This committee is currently in effect for the present outage and all above tasks have been implemented.
- (4) Professional consulting assistance has been retained:
- * Gilbert/Commonwealth is being utilized to evaluate PSC's procurement and warehousing activities. Preliminary findings have been presented, and additional evaluations are in progress.
 - * Zachary Industries, Inc. is evaluating the maintenance scheduling and planning aspects of the maintenance control program at Fort St. Vrain.
 - * Specialists in scheduling supplied by S. M. Stoller Corp. are being utilized for the current outage to supplement PSC's staff. These specialists are

performing the Critical Path Method Schedule updating functions, status reports, and various other support activities.

When these ongoing efforts are fully implemented, PSC will have a short and long-range planning function for Fort St. Vrain.

PSC's short and long-range scheduling function for Fort St. Vrain will integrate the divisional scheduling activities with the master nuclear planning and scheduling function.

NUS Recommendation A.5: Criteria for Change Notices

Criteria for evaluation and prioritization of change notices should be developed. The combination of priority and scheduled start should be used by all nuclear groups involved to coordinate the preparation for construction of change notices. The criteria should specify one individual or position who has safety and design control authority for Fort St. Vrain. The work control group should function as an advisory body to this individual.

PSC Response to Recommendation A.5

This NUS recommendation consists of several separate sub-recommendations, each of which is discussed separately.

- (1) Change Notice Criteria for Evaluation and Prioritization - The present system assigns priorities to change notices during outage planning meetings in which personnel from Nuclear Engineering and Nuclear Production participate. This system, which relies almost entirely upon personal communication and coordination, has a history of being flexible and responsive to new and often sudden developments and requirements. At present, it is both formal and informal in nature. Formal tracking of change notices is provided by Nuclear Engineering.

PSC will develop change notice criteria for evaluation and prioritization in conjunction with the establishment of the master nuclear planning and scheduling function. (See PSC response to Recommendation A.2)

- (2) Design Control Authority - PSC has delegated the responsibility and authority for design engineering to the manager of the Nuclear Engineering Division. Procedures will be reviewed to ensure that this responsibility is clearly highlighted. However, the ultimate responsibility and authority for all plant modifications remains with the Manager, Nuclear Production who has the final authority to determine whether or not a design change is accomplished. This authority is established in existing procedures.
- (3) Safety Authority - It is PSC's policy that concern for safety is an integral responsibility of every position from the unit level to the divisional managers. Existing procedures and policies designate that in matters relating to safety the Vice President, Electric Production, has the final authority.

All change notices are subject to a specific safety design review by a cognizant unit (Nuclear Licensing), which must prepare a prescribed safety evaluation document which becomes a permanent part of each change notice package. In

addition, the Quality Assurance Division reviews and approves all design changes from a quality standpoint.

- (4) Work Control Group - The Work Review Committee enters into the change notice process after the design activity associated with a change notice is completed and approved. Serving as a link between engineering and operations at the start of a change notice implementation phase, its primary function is to review the relevant controlled work procedure (CWP) to confirm that the sequence of work outlined in the CWP can be functionally and safely accomplished as written.

NUS Recommendation A.6: Review of Procedures

A thorough and comprehensive review of procedures should be initiated as soon as possible. The review should be geared to identifying and correcting procedural deficiencies, overlaps, and omissions. In addition, a detailed analysis of procedures which do not get followed should be conducted and the root causes for failure to follow procedures identified. Verbatim procedure compliance should be enforced.

PSC Response to Recommendation A.6

- (1) A comprehensive review of selected Nuclear Production procedures has been initiated:
 - * A procedure (SMAP-11) to establish methods for reviewing departmental procedures has been in interim use since the beginning of January, 1985. This procedure is based on INPO Good Practice OP-210.
 - * Administrative Procedure APM G-2 was revised in December, 1984, to incorporate format requirements for System Operating Procedures (SOP's) and a number of other items which enhance procedural control.
- (2) An additional review of Nuclear Production procedures is in progress to identify and correct deficiencies, overlaps, and omissions in specific regards to the following:
 - * Essentially all SOP's have been rewritten to the standard format specified by APM G-2.
 - * All new procedures are being evaluated against the SMAP-11 criteria.
 - * Selected maintenance procedures are being rewritten to incorporate vendor suggestions, Information Notices and Generic Letters, and problems identified through trend analysis.
 - * Results Procedures (I & C) are being completely rewritten.
 - * All SOP's, which are impacted by design modifications being installed, are being reviewed for technical accuracy in their entirety.
- (3) PSC is actively pursuing filling an open position for procedural control in the Nuclear Engineering Division (NED). As soon as this position is filled, an overall review of NED procedures will be initiated. This review will be coordinated with the PSC response to Recommendation B.1.

- (4) Quality Assurance started reviewing procedures in January 1985. Presently, the process involves the review and concurrence by QA of safety-related procedures and changes thereto. In the near future, QA will review the Technical Specification Surveillance Requirement (SR) Tests relative to content and adequacy. The QA Procedure Review Program is an ongoing project which will be continued through February 28, 1985. The SR Test review will begin in conjunction with the implementation phase of the Technical Specification rewrite programs.
- (5) Nuclear Licensing and Fuels is a newly-established division under the pending reorganization. PSC will develop procedures for this organization consistent with the procedure and policy review outlined in (6) below.
- (6) PSC will investigate and analyze the procedure and policy process within the nuclear organization. This review will focus on how procedures and policies are written, the review/authorization process, the implementation plan, and the follow-up process to ensure continued compliance.

NUS Recommendation A.7: Quality Assurance Management Attention

The Quality Assurance organization should be given additional emphasis and management attention.

PSC Response to Recommendation A.7

With the pending reorganization, the QA organization has been identified as a staff function reporting directly to the Vice President, Electric Production. This enhances the capability to monitor the individual line divisions and direct more executive management influence regarding root causes and recommended corrective action.

In addition, QA's concerns with the administration and implementation of the QA program will be specifically addressed at the Vice President's scheduled biweekly staff meeting as a separate agenda item.

No further action is required on this recommendation.

NUS Recommendation A.8: Establish Effective Tour Program

An effective tour program should be established. Problems found during tours should be summarized by type and location and a periodic report provided to all tour participants in order to increase visibility of plant problems to all levels of supervision and management.

PSC Response to Recommendation A.8

PSC will issue and implement procedures to enhance the existing plant tour program. All aspects of a viable tour system will be investigated and addressed. One example of a potential problem area, general housekeeping, has already been addressed by the establishment of a General Housekeeping Program for Fort St. Vrain in June 1984. Specific features of the program are outlined below:

- * The Station Manager is responsible for the General Housekeeping Program and for assuring plant housekeeping conditions meet management guidelines.
- * Nuclear Production Division superintendents are responsible for assuring that supervisors assigned to them comply with the General Housekeeping Program. They will periodically make tours of the plant to ensure housekeeping is being maintained and will formally report their findings to the Station Manager.
- * The Station Manager is the Nuclear Production contact for resolving interdivisional issues concerning housekeeping. Problems that cannot be resolved at this level will be referred to higher management.
- * The Shift Supervisor makes weekly housekeeping rounds of the plant and reports areas having deficiencies to the Superintendent of Operations with a copy to the Station Manager.
- * Nuclear Production Division Supervisors are responsible for maintaining good housekeeping practices in their respective work locations (i.e. office areas, shops, storage facilities, etc.)
- * Areas assigned to specific individuals are required to be kept clean without notification by the respective supervisor.

In 1984, approximately 20,000 contract labor man-hours were expended for the housekeeping effort. Contract labor supplemented the staff labor.

Enhancement of an effective plant tour program in addition to the General Housekeeping Program is being formulated.

NUS Recommendation A.9: Policy on Staff Meetings

Policies should be developed which require regular and frequent division, department, and group meetings.

PSC Response to Recommendation A.9

The use of staff meetings as a form of communication is a practice that all of PSC's nuclear organizations utilize. Although formal procedures have not been issued on the subject of staff meetings, such meetings are occurring on a regular basis due to formal (memorandum agenda) or informal arrangements established by management and supervision. For example:

- (1) All divisional managers and the Executive Staff Assistant have scheduled biweekly staff meetings with the Vice President, Electric Production.
- (2) The divisional managers and the Executive Staff Assistant normally meet on a monthly basis for interdivisional coordination.
- (3) On the divisional level, each division has or will have an established practice of holding scheduled periodic staff meetings.

In addition, special staff meetings are called at all levels of management/supervision as necessary.

PSC recognizes the value of regular staff meetings and will issue policies that formalize the use of staff meetings as a method of enhancing the communication process within the nuclear organization.

Notwithstanding the benefit of scheduled staff meetings as a form of communication, it should be recognized that communication (via telephone and non-scheduled meetings) does occur on a daily, and even hourly basis, among organizations and within organizations to meet the needs of a particular situation.

NUS Recommendation A.10: Industry Group Participation

PSC should take steps to allow its personnel to increase their awareness of events external to PSC. These steps could include increasing enrollment and attendance with industry groups, as well as subscribing to information services.

PSC Response To Recommendation A.10

PSC believes that the personnel and resources being committed to industry groups at the present time is adequate and commensurate with its obligations in this area of activity. Attendance at industry group functions by management, supervisory, and professional staff totaled 1540 man-days during 1984.

A complete listing of the industry groups in which the Fort St. Vrain management and professional staff maintain memberships (and actively participate) is being assembled.

PSC intends to examine its current areas of participation in industry groups and will consider increasing participation in standards committees, if warranted.

NUS Recommendation A.11: Visibility of Senior Personnel

Visibility of senior personnel should be increased through plant visits, plant tours and attendance at staff meetings at all levels.

PSC Response to Recommendation A.11

PSC supports the current concept of "management by walking around" and increased informal communications, such as that found in staff meetings. PSC also has a strong policy of proper and prudent delegation of responsibilities and associated authority. PSC believes that the two concepts are complimentary.

Once the pending organizational changes and staff additions outlined in the Introduction to the Action Plan are in place, the President and Chief Executive Officer, the Vice President, Electric Production, and senior (divisional level) management will be more visible to subordinates.

No further action is required on this recommendation.

NUS Recommendation B.1: Streamline the Modification Process

Review the modification process, from initial request to final installation and test. Provide for the elimination of redundant reviews and approvals. Change the work procedures to make them as simple as possible.

PSC Response to Recommendation B.1

Although the present modification process is working well and complies with governing regulatory requirements, PSC recognizes that a careful study of the current process may reveal opportunities for streamlining.

A task force will be established by PSC to review the modification process with the initial objective of visiting other selected nuclear facilities to gain knowledge of other systems. Armed with this knowledge, plus information that can be gained from the previous committee that was established to evaluate the in-house design/modification/work control process, the task force will be charged with the responsibility of simplifying the procedures.

NUS Recommendation B.2: Planning Group for Maintenance

Establish a planning group to prepare jobs for work before their release to maintenance. Assign job coordination responsibilities to superintendents in charge of specific maintenance disciplines.

PSC Response to Recommendation B.2

PSC will make improvements in the planning phase of maintenance activities. Although this item is considered to be primarily long-term in nature, actions have been taken during the current outage that will be utilized for the basis for a planning function. The actions taken to date are:

- (1.) Interdivisional expertise has been provided to organizations directly involved with outage work for coordination and task identification and assignment.
- (2.) Contract personnel and Company personnel are being used directly in planning functions, such as critical path scheduling and long lead time material tracking.
- (3.) An independent consultant has been retained to observe and evaluate the existing planning effort and to develop specific recommendations for improvement.

PSC intends to review and implement the recommendations of the independent consultant. The schedule for implementation depends on a number of factors, such as type and magnitude of problems and necessary logistical actions required. Improvements in the planning phase of maintenance activities will be coordinated with the scheduling and planning efforts described under PSC's response to Recommendations A.2 and A.4.

NUS Recommendation B.3: Planning and Scheduling Qualifications

Policies and procedures should be developed and implemented that establish the qualifications of planning and scheduling personnel and the required guidelines and criteria for planning and scheduling activities. Personnel currently involved in the planning and scheduling function should be upgraded through training and experience to the required criteria. Consideration should be given to the hiring of a qualified and experienced planning and scheduling manager.

PSC Response to Recommendation B.3

Qualifications, responsibilities, and authority for scheduling and planning personnel are being developed and will be implemented.

Actions taken to date include:

- 1) The establishment of an independent scheduling and planning function at Fort St. Vrain
- 2) The position of Supervisor, Planning and Scheduling was filled in December 1984.
- 3) The companywide computerized Power Plant Maintenance Information System (PPMIS) was implemented in December 1984 for direct use by scheduling and planning personnel.
- 4) An independent consultant was retained in November 1984 to implement improvements in maintenance crew sizing and functions, daily crew sequencing and manpower loading for proper scheduling, task identification for prioritization and resource allocation, and the establishment of a planning and estimating function.
- 5) Guidelines for material, equipment, and specialized manpower identification and tracking are being addressed.
- 6) On-the-job training for scheduling and PPMIS utilization has started.

NUS Recommendation B.4: Preventive Maintenance Program

Develop a complete preventive maintenance program including engineering analysis and feedback. Routinely specify and conduct postmaintenance tests which ensure that the system or component meets its design intent.

PSC Response to Recommendation B.4

In June 1984, an increased emphasis was placed on the development of an effective preventive maintenance program. Since then, PSC representatives have researched other utility programs, attended industry seminars, and solicited information from various consultants to determine the most appropriate program for Fort St. Vrain.

A comprehensive preventive maintenance program is being developed and implemented to monitor and control maintenance activities associated with equipment, components, and groups of components deemed essential for reliable plant operation. Included in this effort will be the generation of a maintenance information package for each piece of significant equipment, identifying all necessary preventive maintenance activities, how and when the activities will be performed, what group is responsible for performing the activities, the required documentation supporting the basis for such activities, and necessary personnel training and qualifications. A historical data file is available and a trending information program is being developed for evaluating the effectiveness of specific maintenance techniques as well as the overall program. Component failure trends are evaluated for deficiencies in operations and maintenance methods and design. A system for acting on identified deficiencies is being developed and implemented to streamline decision making. Such an approach will result in a fully integrated preventive maintenance program which includes engineering analysis and feedback.

NUS Recommendation B.5: Material Access Exclusion List

The "exclusion list" at FSV governing material access to the site must be reviewed and corrected.

PSC Response to Recommendation B.5

The "exclusion list" at Fort St. Vrain governing material access to the site will be reviewed, evaluated and incorporated into the Fort St. Vrain Administrative Procedures Manual.

This process started in February and March of 1984, when the Procurement Committee - consisting of Quality Assurance (Chairman), the Nuclear Engineering Division, Nuclear Production, and Stores - identified this task as one of its objectives and obtained the services of a consultant to review the PSC procurement program. Appropriate recommendations resulting from that review will be utilized to amend the Fort St. Vrain procurement process.

NUS Recommendation B.6: Revision and control of Drawings

Policies and procedures should be developed and implemented to improve the revision and control of drawings to support plant operations and maintenance.

PSC Response to Recommendation B.6

The system of procedures and policies currently in use to revise and control drawings is effective in supporting plant operations and maintenance activities. Engineering Procedure ENG-3 (Control of Design Documents) establishes the formal practices to be followed in handling, distributing, numbering and storing design documents so that personnel have access to proper and current documents at all times.

In the past, drawings had to be sent off-site for special graphic services involving large quantities of reproducible copies or lamination of drawings. Physical equipment has been recently obtained to provide on-site reproduction of drawings resulting in the quick-turnaround and distribution of revised drawings.

No further action is required on this recommendation.

NUS Recommendation B.7: Procedures for 10CFR50.59

Develop more explicit procedures and criteria for performing safety evaluations to meet 10CFR50.59.

PSC Response to Recommendation B.7

PSC has entered key Fort St. Vrain licensing basis documents into a computerized data base to facilitate reviews of these documents during the development of a safety evaluation. The Facility Operating License, Technical Specifications, Final Safety Analysis Report, and most of the correspondence between PSC and the NRC are part of this data base. The remaining correspondence between PSC and the NRC will be entered into the data base. PSC licensing personnel performing 10CFR50.59 safety evaluations on a proposed change utilize the computerized search function to identify and review all portions of the licensing documents pertaining to structures, systems, equipment, procedures, setpoints, analysis, and PSC regulatory obligations affected by each proposed change.

Administrative Procedure APM Q-3 (Design Control System) contains instructions for performing 10CFR50.59 safety evaluations. PSC considers these instructions to be adequate and fully responsive to 10CFR50.59.

PSC will enhance training in the performance of 10CFR50.59 safety evaluations to ensure that licensing personnel understand this regulation and Administrative Procedure APM Q-3, which implements this regulation for changes to the Fort St. Vrain facility. The training will ensure that licensing personnel are knowledgeable of the procedures and the resources available for researching topics in the licensing data base. The NRC's position on 10CFR50.59 safety evaluations, as expressed in I&E Circular No. 80-18 dated August 22, 1980, will be reviewed during the training sessions.

NUS Recommendation B.8: Separate System for CARs

Establish a separate system for CARs so that only significant items are called CARs, and give them proper management attention. The system should address priorities, schedules, reviews, etc. Other items presently carried as CARs can be handled in a similar system, if desired.

PSC Response to Recommendation B.8

In order to ensure that only significant quality assurance findings are recorded as Corrective Action Requests (CARs), internal controls are being established to provide for a review within the Quality Assurance Division. This process will include evaluation criteria for appraising the significance of potential CARs.

NRC "open items" and "unresolved items" are considered significant. PSC will continue recording both "open items" and "unresolved items" as CARs to eliminate the need for establishing a redundant system.

No further action is required on this recommendation.

NUS Recommendation C.1: Commitment Control Program

Develop and implement policy regarding commitment control. Consider the following points as a minimum: accountability, measurable performance goals, requirements, priorities, and analysis.

PSC Response to Recommendation C.1

A written policy will be prepared and issued to formalize the existing commitment control program. The policy will define the scope and purposes of the commitment control program, will specify the organization responsible for managing the program, and will provide information as to how commitments are identified, assigned, acknowledged, tracked and closed.

The policy will provide for maintaining current identification and control of active commitments and ongoing regulatory obligations, and upgrading the periodic status reports on active commitments in order to track target completion dates. The commitment control program will be subject to periodic review by executive level management, and regular analyses to determine effectiveness of the program and identify areas where the program can be improved.

Appropriate staff and resources will be provided to administer the program.

NUS Recommendation C.2: Regulatory Correspondence Review

The methods used for internal review of regulatory correspondence should be improved and standardized with procedural guidance developed regarding use, basis, uniformity, and distribution.

PSC Response to Recommendation C.2

Procedures will be developed and implemented providing for a uniform review of regulatory correspondence. This review will identify commitments and will document the source of each required action. The procedures will include written criteria for what constitutes a commitment and the distribution that will be made of the highlighted commitment document to responsible management and unit level personnel for action.

Appropriate staff and resources will be provided to administer and coordinate the commitment control system as described in the PSC response to Recommendation C.1. PSC will develop the necessary methods and procedures to implement the regulatory correspondence review into the Commitment Control System. This work will be coordinated with the master planning and scheduling function to ensure that adequate and timely Company resources are available.

NUS Recommendation C.3: Regulatory Documents Review

Reviews of regulatory documents must be undertaken on a conceptual basis to determine whether installed equipment, which is often different from that described by the NRC, might fall under the requirements or intent of a regulatory directive.

PSC Response to Recommendation C.3

A systematic review of regulatory documents will be implemented to determine all ongoing obligations which are applicable to the Fort St. Vrain facility. This review activity will be conducted on a continuing basis, and a catalog or listing of all applicable regulatory obligations will be maintained and distributed to responsible management and unit level personnel. The reviews will be conducted at both the conceptual level and the detailed level to determine applicable regulatory commitments as well as conceptual regulatory commitments. PSC has an existing Licensing Coordinator who is currently performing reviews of regulations. The duties of this position will be enhanced to include the development and promulgation of a system for acknowledging and controlling all ongoing regulatory obligations.

In addition to regulatory obligations pertaining only to equipment, ongoing regulatory obligations for all nuclear activities (e.g. operations, maintenance, engineering, quality assurance, management, etc.) will be cataloged, promulgated and acknowledged periodically.

NUS Recommendation D.1: Resource Requirement for Training

A detailed manpower study should be performed to determine the resource requirements needed to thoroughly accredit the nuclear organization training.

PSC Response to Recommendation D.1

PSC recognizes the current nuclear industry effort to achieve INPO accreditation of the ten training positions currently identified and has initiated action in this area.

During December of 1984, a detailed study was completed by Nuclear Production to determine the manpower required to achieve accreditation of the ten training positions. A modification to the 1985 Operating Plan was requested, which included a request for increased manpower, equipment, facilities, and consulting services. In addition, the Operating Plan modification identified several organizational changes in the training area.

The facilities requested above are of an interim nature. A complete facility and equipment requirements study is being completed by the PSC Facility Services Department and an outside consultant.

When the detailed equipment study is completed, the equipment required for accreditation will be included in the 1986 Operating Plan.

INPO has established training guidance for technical support functions that are directly involved with plant operations. However, this guidance does not directly address other nuclear organizations such as Nuclear Engineering, Nuclear Licensing and Fuels, and Quality Assurance. These latter organizations will develop training programs utilizing the available INPO technical guidance.

NUS Recommendation D.2: Nuclear Training Program

A training program should be developed for all personnel involved in nuclear-related activities at Fort St. Vrain. The training program should be structured against a job and task analysis conducted for the various positions.

PSC Response to Recommendation D.2

A training program will be developed for all personnel whose positions have been identified by INPO as being included within the scope of the INPO accreditation program. In addition, formal training programs are being developed for the ten positions identified by the INPO accreditation program. A job and task analysis will be completed to provide the basis for the development of these training programs.

See PSC's response to Recommendation D.1 for information concerning the training programs that will be developed for nuclear organizations other than Nuclear Production.

NUS Recommendation D.3: Formal Training for Entry Into New Positions

A formal evaluation should be performed to determine what training is required for a candidate prior to entry into a new job position. Each employee should be thoroughly trained and prepared for entry into the company through a comprehensive, introductory orientation program. The program should include job-specific requirements, departmental responsibilities and goals, and the nuclear organization.

PSC Response to Recommendation D.3

PSC started to emphasize non-licensed operator training as part of the INPO accreditation program in October 1984. It is anticipated that approximately 50% of the entry level programs for non-licensed operators will be completed by early March, 1985. PSC also has established a large number of formal Corporate training programs covering such subjects as supervisory development, foreman's training, maintenance apprenticeship, middle management development, public utilities report guide, etc. These training programs are catalogued in the Catalog and Calendar of Courses issued by PSC's Training and Development Department.

An evaluation will be made to determine the training Nuclear Production employees will receive before assuming the responsibilities of a new position. An orientation/training program for each position (including INPO-accredited positions) will be developed that contains job requirements, departmental responsibilities and goals of the nuclear organization.

An introductory orientation program, structured to meet INPO specifications, is under development. General Employee Training, the only program that contains a portion of this introductory material, is being utilized on an interim basis.

The following key milestones will be used to track the completion of these actions:

- * Development of Job Analyses
- * Development of Training Matrices
- * Development of Program Administrative Procedures

NUS Recommendation D.4: Individual Training Requirements

Training policies, procedures and methodologies should be developed that address the assessment of individual performance, the identification of individual training needs, and successful completion of training requirements.

PSC Response to Recommendation D.4

As noted under Recommendation D.3, PSC has established a large number of formal Corporate training programs.

PSC will incorporate an evaluation phase into all current and proposed Nuclear Production training programs. The evaluation phase will incorporate the identification of methods to measure training system performance, the conversion of performance data into reliable program information, and the implementation of training development recommendations. In addition, the evaluation will also focus on how successfully the individual received the desired training by implementing testing and grading criteria into each program.

The following key milestones will be used to track the completion of these actions:

- * Development of testing and grading criteria
- * Development of post training surveys and evaluation methods
- * Development of a program for retraining to reflect plant changes
- * Development of procedures to update lesson plans based on plant changes and utility information

The implementation of this recommendation, based on INPO guidelines and criteria, will provide for continued compliance to the recommendation.

NUS Recommendation D.5: Consolidated Site Training

All site training activities should be consolidated under one person who will be responsible for all site-related training.

PSC Response to Recommendation D.5

Nuclear Production training responsibilities will be consolidated under the Nuclear Production Training Department. The Training Procedures Administrative Manual and other applicable procedures will be modified to specify that except for management training, all Nuclear Production training activities are the responsibility of the Training Supervisor.

NUS Recommendation D.6: Retraining of Licensed Personnel

The retraining program for licensed personnel should be modified to accommodate team training and incorporate training needs identified by on-shift performance and/or evaluation.

PSC Response to Recommendation D.6

The Licensed Operator Retraining Program is adequate. Numerous audits by the NRC and others and the successful completion of requalification tests by PSC operators have demonstrated the adequacy of the existing retraining program.

Proposed 10 CFR 55.45 includes team dependent training as one of the areas to be addressed in operating tests. The current requalification program does not include team dependent training. The method for training evaluation has not included a formal evaluation of training needs identified by on-shift performance. The accreditation criteria requires that a formal program for evaluation of training programs be established.

The accreditation process (specifically job and task analysis) will identify the tasks that require team dependent training. A program will be established to train the operators on those tasks. The evaluation of on-shift performance will be completed during the evaluation phase of the training programs as identified by INPO for accreditation.

NUS Recommendation E.1: Augment Nuclear Staff

PSC should augment the nuclear staff with trained personnel having experience in licensing, maintenance, scheduling, training, and planning.

PSC Response to Recommendation E.1

The responsibility for identifying specific staff needs and resources lies with each divisional manager. The divisional managers have identified personnel requirements to meet their present and future responsibilities. These requests are currently under executive level review. This review will concentrate on the overall staffing requirements based on the potential impact of the pending reorganizational changes outlined in the Introduction to the Action Plan.

NUS Recommendation E.2: Vice President, Electric Production Span of Control

It is recommended that PSC consolidate all nuclear-related operations under one senior nuclear executive whose responsibilities would be limited to nuclear activities. The consolidation should bring together all groups involved with operations, maintenance and support of the Fort St. Vrain Nuclear Power Station.

The senior nuclear executive position should be provided with full authority and management support to conduct nuclear-related business and operations.

The placement of this position should be such that it is organizationally capable of executing such authority. Consideration should be given to placing the senior nuclear executive under the President PSC.

PSC Response to Recommendation E.2

It is extremely important to maintain a total Electric Production organization that is consistent with PSC's policies and organizational concepts. Under the pending reorganization outlined in the Introduction to the Action Plan, the Vice President, Electric Production, will report directly to the President and Chief Executive Officer. In addition, PSC intends to implement another significant organizational change by creating a General Manager, Fossil Production who will report to the Vice President, Electric Production. The existing three fossil managers will report to this General Manager which will reduce the existing span of control for the Vice President, Electric Production. In addition, the Quality Assurance Division has been identified as a staff function reporting directly to the Vice President, Electric Production. See PSC response to Recommendation A.7.

The Nuclear Regulatory Commission, Region IV, Arlington, Texas, has been briefed on the details of this proposed organization during a visit by Mr. O. R. Lee on February 19, 1985. It is anticipated that the basic organizational structure at the divisional manager and above will be in place by mid-March 1985.

Several new functions will be established within the nuclear organization:

- * A function responsible for implementing the Action Plan.
- * A function responsible for directing the Performance Enhancement Program.
- * A function responsible for establishing and implementing a master nuclear planning and scheduling activity.

NUS Recommendation E.3: Manage Licensing/Nuclear Fuels from Site

The present makeup of the licensing and nuclear fuels group (Office of the Executive Staff Assistant) and the QA/QC group appears adequate from an organizational standpoint. However, it is the recommendation of the Review Team that these groups be managed from the FSV site.

PSC Response to Recommendation E.3

The Quality Assurance Division has been and is currently being managed from the Fort St. Vrain site. A site licensing group was established in conjunction with the reorganization that occurred in the Fall of 1984.

PSC will initiate a cost benefit study and analysis of human resources to determine whether it will be in PSC's best interest to manage the Nuclear Licensing and Fuels Division from the Fort St. Vrain site.

NUS Recommendation E.4: Combined Engineering Functions

It is recommended that all engineering and documentation functions be combined into one organization managed from the FSV site. Functional areas in "Nuclear Engineering" would include:

- * Site Engineering (including Nuclear Design)
- * Nuclear Engineering Records (and Nuclear Documentation Control)
- * Nuclear Betterment Engineering (excluding I&C Maintenance Functions)
- * Technical Advisors

The engineering group at FSV should be organized such that they may handle all small and medium projects (< \$1,000,000). All major projects should be handled by the Systems Engineering Division.

PSC Response to Recommendation E.4

Several responsibilities (Site Engineering and Nuclear Engineering Records) of the Nuclear Engineering Division are currently being managed from the Fort St. Vrain site. PSC will initiate a cost benefit study and analysis of human resources to determine whether it will be in PSC's best interest to manage all functions of the Nuclear Engineering Division from the Fort St. Vrain site.

The present organization, in which certain support engineering groups such as Nuclear Betterment Engineering and the Technical Advisors are within the Nuclear Production organization, is accommodating present needs and is consistent with previous recommendations given to PSC by INPO. It provides for immediate response and close control and coordination.

As noted by the NRC in addressing the situation at Fort St. Vrain pertaining to nuclear knowledge and experience, it would be difficult to foresee an improvement if nuclear engineering, on a major project, was performed by a non-nuclear engineering and project staff.

NUS Recommendation E.5: Nuclear Production Organizational Changes

It is recommended that the Station Manager's organization be modified to absorb I&C maintenance work activities while relinquishing the engineering functions of Nuclear Betterment to "Nuclear Engineering" as discussed in the preceding paragraph. Further, the "shift supervisor-training" position should be transferred to the training organization. This arrangement will result in an "Operations & Maintenance" group devoted solely to the objective of operating and maintaining the plant. Functional areas in "Station Operations and Maintenance" will include:

- * Operations
- * Maintenance
 - Electrical
 - Mechanical
 - Instrumentation & Control
- * Scheduling
- * Planning

PSC Response to Recommendation E.5

This recommended change would dilute the chain of command that the Manager of Nuclear Production presently has over these functions in terms of commitments, responsibilities and task priorities. A major reorganization at this time would be detrimental to the personal commitments made since September 1984 and have the potential to undermine the general morale at Fort St. Vrain.

No further action is required on this recommendation.

NUS Recommendation E.6: Reorganize Technical/Administrative Department

The Review Team concluded that the functions of the Technical/Administrative Department are redundant to those of other organizations. Based on expanding "Nuclear Engineer" to include all engineering and documentation, it reduces this group to only security and computer services. Recommendations are to transfer these activities to "Support Services" and entirely dissolve the Technical/Administrative Department. "Support Services" would therefore be responsible for:

- * Health Physics
- * Chemistry
- * Training
- * Security
- * Computer Services

PSC Response to Recommendation E.6

PSC believes that direct operational control of the groups associated with this recommendation should remain under the management of the Nuclear Production Division and not under a parallel chain of command. This ensures direct response in terms of commitments, responsibilities, and priorities, to plant specific functions.

The Nuclear Production Division is in the process of completing organizational changes which will enhance the effectiveness of the support functions being provided.