OCT 4 1989

Memorandum For: Chairman, U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

From: NRC Staff Inspectors

Subject: Comanche Peak's Fuel Load Readiness and the Systematic Assessment of Licensee Performance (SALP)

This memorandum is to inform the commission about the readiness to load fuel at Comanche Peak, and the recent SALP evaluation process and the proposed report. As NRC inspectors, it is our concern that the pending SALP report is neither accurate nor complete reflection of TU Electric's performance during this SALP period.

We believe that the Commission should be aware of what we view as manipulation and the exclusion of factual information. If such information were properly considered and evaluated, it would indicate a less than satisfactory performance rating in some areas, a need for increased attention and applicant action prior to NRC approval to load fuel.

The SALP conclusion, which gives the applicant a rating of "2" in every area and identifies no adverse performance trends is incorrect and invalid. Ten NRC managers made up the SALP Board. Three were Region IV managers who had no direct and siginificant involvement with the site. Two other board members were involved with site matters but they administered their project management and licensing duties from their White Flint offices. NRC Senior Resident/ Resident and Consultants who were entirely knowledgeable of licensee performance had no vote on the board. All of the recommendations for below average, coming from those who were knew the real performance, were outvoted by managers on the SALP Board. Additionally, information and findings brought to the attention of the SALP Board were deliberately excluded, giving a false impression about the plant. For example,

1. The SALP Board did not adequately consider the full implications of certain ASME issues identified during reporting period by staff inspectors.

2. The SALP Board did not adequately consider the inability of the applicant to recognize conditions potentially or actually adverse to quality as demonstrated by events surrounding service water system and the auxilary feedwater system (check valves and motors).

3. The SALP Board did not adequately consider the inability of the applicant to identify and evaluate root causes of of deficiencies and program failures necessary for effective corrective action.

Enclosure 1

In order to provide the Commission evidence of some of the issues that are not being properly considered, we are attaching example pages from draft inspection reports and internal memos. Although other areas were also improperly considered, we believe these examples will support our concerns and provide the Commission a chance to correct this situation.

Our greater concern, which is shared by many TU Electric's site personnel is that Comanche Peak is simply not yet ready to load fuel. In addition to the TU Electric's poor performance in some areas, TU Electric has a large number of open and unresolved items and a large construction/engineering staff on site who are and will continue working on Unit 1. This indictes they are not ready to load fuel. Disregarding financial considerations, both the NRC and TU Electric know that a realistic fuel loading date is about six months from now, if no additional major problems are found. An additional consideration is TU Electric's excessive over reliance on contract personnel. We are concerned that the applicant's unrealistic schedule to load fuel in October 1989 will compromise the agency's inspection efforts and the applicant's progress since 1984.

Attachments:
(1) Pages of Draft Reports
(2) Memoranda

cc: CGrimes, Director OSP
JTaylor, Deputy EDO
BGarde, Esq. Garde Law Office

INSPECTION PLAN FOR COMANCHE PEAK OPERATIONAL READINESS ASSESSMENT (ORAT) INSPECTION

I. Objective

This inspection is being performed in accordance with draft Inspection Procedure IP 93806, "Operational Readiness Assessment Team Inspections," which is included as Attachment 1. The objective of this inspection is to provide a major input and basis for a NRC determination of the startup readiness of the Comanche Peak Steam Electric Station (CPSES). Operational readiness assessments are required before issuance of the low-power license, and before issuance of the full-power license or during power escalation. The major focus of the inspection will be the verification of an appropriate operating attitude well before fuel loading and initial criticality. In addition, programs that control construction completion, procedural use and work assignments should have been phased out or merged with operational control programs. The inspection will also emphasize the effectiveness of management oversight, corrective action programs, root cause analysis, and the readiness to support operations. At the conclusion of the inspection we will provide a recommendation on whether the applicant can safely proceed to fuel loading and low power testing.

II. Background

The Comanche Peak Steam Electric Station (CPSES) Units 1 and 2 are owned by Texas Utilities Electric Company (TU Electric), a subsidiary of Texas Utilities Company (TUCo), Texas Municipal Power Agency (TMPA), and Tex-La Electric Cooperative of Texas, Inc. (Tex-La). TMPA is in the process of transferring their ownership interest to TU Electric and Tex-La is transferring their ownership to TU Electric in the near future. The lead applicant is TU Electric, which has been designated Agent for CPSES by the owner-applicants. The facility is a standard 1160 MW Westinghouse four-loop pressurized water reactor with a steel lined, reinforced concrete containment. The units are located in Glen Rose, Texas, approximately 40 southwest of Fort Worth, Texas.

The applicant received a Construction Permit in December 1974 and had essentially completed construction and preoperational testing and turned the systems over to operational control in 1984. The original architect-engineer was Gibbs and Hill; however, they were replaced by Stone and Webster after 1985. Ebasco and Impell have also provided engineering support since 1985. In 1982 numerous adverse allegations were received, most of which concerned construction adequacy and quality assurance. These issues have been subsequently referred to as the "Walsh-Doyle" issues. In 1983 an NRC Construction Appraisal Team confirmed these allegations and the ASLB determined that TU Electric was not in accordance with Appendix B of 10 CFR 50.

The Office of Nuclear Reactor Regulation (NRR) assembled a Technical Review Team (TRT) onsite in 1984. The TRT included 50 technical experts from the NRC, national laboratories, and consulting organizations. The TRT spent four months investigating the allegations and documented their findings in five Supplemental Safety Evaluation Reports (SERs). In addition, numerous concerns about the design and construction of the plant evolved through contentions before the NRC's Atomic Safety Licensing Board (ASLB) and the Comanche Peak Independent Assessment Program review conducted by Cygna Energy Services.

In response to the concerns, the applicant implemented the Comanche Peak Response Team (CPRT) in 1984 to address all relevant issues, existing and future. This program involved a re-verification of the design and re-inspection of the construction of selected engineering disciplines. In 1985 the design review was initiated. Based on the extent of deficiencies identified, TU Electric developed the Corrective Action Program (CAP) in 1987 to require a complete design re-verification; hardware validation, including hardware re-inspection and modifications; and design and "as-built" reconciliation in a broad number of areas. The development and implementation of the CAP for design and construction deficiencies typifies the aggressive and thorough approach that TU Electric management has applied to safety issues. This attitude is regularly demonstrated by TU Electric managers, several of whom are former NRC employees, but not always by the working staff.

In 1987, the NRC Office of Special Projects (OSP) was formed to ensure comprehensive and timely resolution of complex regulatory concerns with a strengthened and integrated staff organization and direct lines of management responsibility and authority and appropriate high-level direction. This Office was incorporated into the Office of Nuclear Reactor Regulation (NRR) in January 1989 as the Associate Directorship of Special Projects and retains responsibility for all licensing and inspection activities.

There has only been one recent escalated enforcement case completed. In February 1989, the staff cited TU Electric with a Level III Violation for failure to submit a timely application for extension of the Unit 1 construction permit. The applicant had inadvertently allowed the original permit to expire.

There have been slightly over 1000 allegations received by the staff concerning Comanche Peak. All of the allegations received prior to formation of OSP have been closed. Of the remaining, approximately 13 remain open.

In July 1988, TU Electric reached an agreement with the remaining intervenor (i.e., Citizens Associated for Sound Energy) and the ASLB hearings were dismissed. As a result, Ms. Juanita Ellis, became a member of the Operations Review Committee and TU Electric compensated CASE for previous expenses. In August 1988, a new group, the Citizens for Fair Utility Regulation (CFUR), and an individual, Mr. Joseph Macktal, are attempting to gain status as intervenors.

The extensive corrective action effort to correct the numerous design and construction deficiencies has been underway at CPSES over the past several years. This program has resulted in a significant number of modifications to bring the plants into conformance with NRC requirements. In March 1988, the applicant temporarily suspended work on Unit 2 to concentrate resources on Unit 1 completion. The applicant is currently nearing completion of the corrective actions and has committed to re-perform greater than 90 percent of the preoperational tests as the Prestart Test Program. Hot functional testing (HFT) and integrated leak rate testing on Unit 1 was completed in July (Unit 1 previously underwent HFT in 1985).

The applicant has committed to begin a two-week operational readiness period following completion of construction and testing. The project status report currently shows a fuel load readiness date and the beginning of this "quiet time" on October 2, 1989. The applicant is running about two-weeks behind

schedule; therefore, the earliest they should be ready for licensee issuance is during the second week of our inspection.

III. Inspection Plan

A. Objectives

The inspection has three major objectives:

(1) Independently assess the Comanche Peak Steam Electric Station (CPSES) power ascension, operations, and operations support programmatic and staffing readiness for operations.

(2) Monitor daily activities in the areas of operations, testing, maintenance, engineering and technical support, and quality assurance in order to assess whether the applicant is ready to operate the facility safely.

(3) Evaluate the status of the prestart testing program to determine whether testing has been essentially completed and that outstanding construction deficiencies will not adversely affect the safe operation of the plant.

B. Scope

The emphasize of the inspection will be an independent assessment of the effectiveness of management oversight, corrective action programs, root cause analysis, and the readiness to support operations. The inspection will verify that the applicant has established an appropriate operating attitude well before fuel loading.

In order to focus the inspection effort, we will limit our detailed review of safety-related activities, system alignments, material condition, surveillance testing, and operational procedures to the following systems:

(1) High Pressure Injection.
(2) Decay Heat Removal.
(3) Auxiliary Feedwater.
(4) Diesel Generators.
(5) Station Batteries.

This inspection plan has been developed to address the applicant's operational readiness in the six functional areas. A detailed evaluation criteria for each of the areas is provided in Appendix A. Any suggested changes should be provided to the team leader. The functional areas are:

(1) Plant Operations.
(2) Surveillance and Testing.
(3) Facility Management Organization.
(4) Power Ascension Test Program (PATP).
(5) Maintenance.
(6) Engineering and Technical Support.

C. Team Members

In order to accomplish this inspection, the team will be divided into two sections -- operations and operational support. The operations section will

focus on operations department activities and control room observations and the operations support section will focus on the system walkdowns and the operational readiness and support of the remaining departments. Continuous control room coverage is anticipated for at least 72-hours (Tuesday through Saturday) of the first week onsite). In addition, the operations support section will perform walkdowns of the selected systems during the same time period. On Sunday (October 22) the entire team will reconvene to determine the direction of the remainder of the inspection. The team members are listed below.

Chris A. VanDenburgh - Team Leader - NRR - (301) 492-0965
Dwight D. Chamberlain - Asst. Team Leader - Region IV - (817) 860-8249 (Part time)

Operations Section

Jay R. Ball - Discipline Lead - NRR - (301) 492-0962
~~William D. Johnson - Region IV/CP-SRI - (817) 897-1500~~ In Japan
Jackie E. Bess - Region IV/STP-SRI - (512) 972-2507
Larry R. Veeder - Prisuta-Beckman Associates, Inc. - (412) 872-9157
Robert L. Lewis - Prisuta-Beckman Associates, Inc. - (412) 872-9157
Bruce W. Deist - Consulting Services - (301) 972-1973

Operations Support Section

Thomas O. McKernon - Discipline Lead - Region IV/DRS - (817) 860-8153
Donald C. Kosloff - Region III/Davis-Besse - (419) 898-2765
Donald A. Beckman - Prisuta-Beckman Associates, Inc. - (412) 872-9157
Gary G. Rhoads - Prisuta-Beckman Associates, Inc. - (412) 872-9157
Paul E. Harmon - Region II/Sequoyah-RI - (615) 842-8001

D. Team Assignments

The inspection report is required to be issued within 45 days of the end of the inspection. To simplify the development of the report, I have assigned the following topics for development and documentation. These assignments have been made based on my understanding of each inspector's experience and background and I have attempted to evenly distribute the workload. If any additional topics are identified (either before or during the inspection) I will make the required changes. These assignments are not final and any questions or suggestions should be identified as soon as possible.

An inspection report outline will be provided during the inspection which will be similar to the topics identified in Appendix A.

Operations		Operations Support	
Ball	Shift Professionalism Procedure Adherance	McKernon	Facility Management Outstanding Construction Deficiencies
Harmon	Post Trip Review Process Shift Communications Shift Routine/Turnovers	Kosloff	Power Ascention Program Surveillance and Testing MTE Control

Bess -	Operability Determinations Response to Annunciators Off-normal Conditions	Beckman -	Maintenance Housekeeping Room and Area Turnovers Station Vital Drawings
Veeder -	Equipment Out-of-Service System Status Control & Logs LCO Tracking	Rhoads -	Engineering & Tech. Support 50.59 Safety Reviews Technical Specifications
Lewis -	Operating Procedures Abnormal Procedures Event Reporting	Johnson -	Self-Assessment Program System Valve Lineups Lessons Learned Programs
Deist -	Organization & Staffing Staff Stability and Experience Operator Training		

Attachments 2 and 3 contain background information on the facility provided by NRR's Special Project's Division and current organization chart. In addition, I have included a copy of the Shoreham ORAT Inspection Report (50-322/89-80) which will be the model for our inspection report. Also included are copies of the inspection report for the Augmented Inspection Team (50-445/89-30; 50-446/89-30) and resultant Information Notice 89-62 conducted following recent problems with Borg-Warner check valves at Comanche Peak. This inspection identified several weaknesses with the operation of the facility. These concerns were communicated to the applicant and are included as Attachment 4. And finally, I have included copies of recent inspections (50-445/89-58; 50-446/89-58 and 50-445/89-43; 50-446/89-43) concerning the implementation of the emergency plan which identified several problems concerning the knowlege level of the operators. I will be forwarding system descriptions and selected plant procedures after I complete the pre-inspection visit during the first week of October. In the meantime, please familiarize yourself with information provided and communicate any suggestions for organizing our task directly to me.

IV. Inspection Schedule

A. Inspection Preparation

Sept. 25	Receive ORAT inspection planner.
Oct. 2	Provide comments to team leader by COB.
Oct. 10	Receive pre-inspection review material.

B. Inspection

Oct. 15	Arrival at motel.
Oct. 16 (8:00 am)	Arrive onsite at Comanche Peak - Badging, entrance and site orientation.
Oct. 17-25	Perform system walkdowns, monitor control room activities, review procedures, and conduct interviews.

Oct. 26 (1:00 pm)	Conduct NRC management briefing and practice applicant exit.
Oct. 27 (8:00 am)	Conduct exit.

C. Inspection Report Preparation

Oct. 30 (8:00 am)	Arrive at NRC White Flint Offices.
Oct. 30 - Nov. 3	Entire team complete and approve draft inspection report.
Nov. 6	Submit draft inspection report to technical editors.
Nov. 14	Submit draft inspection report to Section Chief.
Nov. 21	Submit draft inspection report to Branch Chief.
Nov. 29	Submit draft inspection report to Division Director.
Dec. 6	Submit approved inspection report to Projects Division.
Dec. 11	Issue inspection report 45 days from inspection exit meeting.

V. Travel Itinerary

Reservations for fourteen single rooms at the government rate have been made in my name at the Plantation Inn in Granbury, Texas, for October 15 - November 3. Directions to the CPSES are included as Attachment 5. Please call (817) 573-8846 by September 4 to individually confirm and guarantee your reservation. I plan to arrive at the motel on October 10 at approximately 6:00 pm. The entire team will meet on October 16 at 7:00 am in the hotel lobby. I anticipate departing the site on October 27 at approximately noon, therefore your departure reservations should be made accordingly.

We will begin work on the inspection report on the Monday (October 30) following the conclusion of the inspection. The entire team will participate in this effort. Please plan on beginning work at the NRC White Flint offices at 8:00 am on October 30. The draft inspection report will be completed by COB November 3 and the inspection report will be issued within 45 days of the conclusion of the inspection.

Reservations for ten single rooms at the government rate have been made for October 29 - November 10 under a group reservation (i.e., NRC Group-VanDenburgh) at the Guest Quarters Inn located at 7335 Wisconsin Avenue, Bethesda, MD, 20814. The motel is within one block of the Bethesda station of the Metro Red Line. Please call 424-2900 or (301) 961-6400 by October 16 to individually confirm and guarantee your reservation. Please inform me of your travel itinerary for both trips, including rental cars plans, before COB October 10.

VI. Inspection Routine

Normal working hours will be 8:00 AM to 5:00 PM while onsite, including the first Saturday (October 4). All NRC employees should arrange to suspend their

compressed and flexible time work schedules for the duration of the inspection. Overtime will be approved on a case basis by the team leader.

Team meetings will be held daily at 8:00 am. All team member's observations will be provided on Appendix B in sufficient detail to support their observations and conclusions. The team leader will meet with the applicant daily following the team meeting. The status of outstanding concerns and significant observations developed from the previous day's Appendix B forms will be discussed.

The inspection will be effectively over by noon on October 26. All further team efforts will be devoted to preparing for the NRC management briefing and the exit meeting with the licensee. The inspection report number is 50-445/89200. NRC personnel should charge their time to the following:

Docket Number	50-445
Inspection Report Number	89200
Inspection Procedure (IP)	93806
Inspection Procedure Elememt (IPE)	0A
Item of Major Interest (IMI)	10HI

Please contact me at (301) 492-0965 upon receipt of your review materials and for confirmation of assignments.

Chris A. VanDenburgh, Team Leader
Special Inspection Branch
Division of Reactor Inspection
and Safeguards
Office of Nuclear Reactor Regulation

Attachments:
(1) Draft Inspection Procedure IP 93806
(2) Comanche Peak Background Information
(3) Comanche Peak Organizational Chart
(4) NRC Concerns Regarding Operations Response to Check Valve Failures
(5) Maps to CPSES

APPENDIX A

OPERATIONAL READINESS ASSESSMENT EVALUATION CRITERIA

Plant Operations

Operations organization and staffing
Staff stability and morale
Operations experience and training (including remote shutdown training)
Operating shift professionalism
Methods for operability determination
Post-trip review process
Lessons learned (root cause) programs
Performance of safety evaluations
Event reporting
Response to annunciators and off-normal conditions
Nuisance alarm and indication controls
Shift routine and turnover
Equipment out-of-service controls
System status control and logs
Operating and emergency operating procedures
Procedure adherence
Verification of system line-ups (including use of local valve position indications)
Housekeeping and material control
Communications with other departments

Surveillance and Testing

Organization and staffing
Qualifications and training
Interface between operations and startup testing organizations
Completion of prestart (preoperational) testing
Observations of surveillance performance
Technical Specification technical adequacy
Technical Specification surveillance LCO tracking and control
Performance of 10 CFR 50.59 safety reviews
Calibration of installed and portable measuring and test equipment
Surveillance procedure review
Surveillance training of operators
Management and quality assurance overview

Facility Management Organization

Organization and staffing
Qualifications and training
Management oversight activities and goals
Applicant's operational readiness assessments (internal and external)
Onsite safety review committee
Lessons learned from previous new plant operating experience
Root cause and corrective action programs

Power Ascension Test Program (PATP)

PATP organization and staffing
Qualifications and training
Approval for plateau changes
Quality assurance controls for PATP
Staffing prerequisites for testing
Program change controls
Test status and scheduling

Maintenance

Maintenance organization and staffing
Qualifications and training
Construction deficiency "punch-list" items
Maintenance work observation
Material condition and labeling of systems and components
Predictive maintenance programs
Post-maintenance testing
Work planning and prioritization
Parts and material control

Engineering and Technical Support

Engineering organization and staffing
Qualifications and training
System engineering
Vendor manual control
Review of generic communications
Modification controls
Configuration controls
Temporary modifications

APPENDIX B

Subject :

Observation No. :

Revision :

References :

Discussion :

Significance:

Required Actions :

ATTACHMENT NO. 1

INSPECTION PROCEDURE 93806

OPERATIONAL READINESS ASSESSMENT TEAM INSPECTIONS

PROGRAM APPLICABILITY: 2514

93806-01 INSPECTION OBJECTIVE

The objective of this procedure is to provide guidance on conducting Operational Readiness Assessment Team (ORAT) inspections for new plants. Results from these inspections will provide a major input and basis for a NRC determination of startup readiness.

93806-02 INSPECTION REQUIREMENTS

02.01 Inspection Planning. Conduct of Operational Readiness Assessments is required before issuance of the low-power license, before issuance of the full-power license, or during power escalation. The inspection schedule and scope are to be tailored to the individual plant circumstances. The inspection should concentrate on perceived weaknesses and areas important to plant operations which have not yet been sufficiently reviewed. Attachment 1 provides an outline of the areas that may be covered during assessment of the readiness for power operation.

02.02 Plant Inspection. The following specific items, in addition to those listed in Attachment 1, should be considered during ORAT inspections:

a. Focus the inspection on safety-significant activities such as fuel loading, reactor startup, heatup/cooldown, and surveillances. Direct observations of activities are preferred and should be supplemented by personnel interviews and document reviews. Systems should be selected for walkdown and inspection on the basis of their potential to cause challenges to safety systems. (The results of similar unit design or generic probabilistic risk assessment studies should be used, if available.)

b. Evaluate licensee management transitional controls. Construction deficiency "punch" list items transferred to the operations organization for completion are either subject to contractor disposition or are converted to maintenance work order items. These items constitute incomplete construction phase work for which management controls are required to ensure readiness for operation.

Evaluate management oversight of and involvement in daily work and preparation activities. Review licensee performance in conducting preventive maintenance activities and controls over deferred preventive maintenance.

c. Review the licensee's program for operating experience feedback and verify implementation. Assess whether controls exist that continually implement lessons learned and that research the safety significance of problems that have developed during the startup of similarly designed plants. Select and review, in detail, several operational problems experienced by the licensee during the preoperational or startup test phase and assess whether the problem was fully reviewed and understood prior to further testing. Determine if the licensee has reviewed NUREG-1275 and applied lessons learned. Evaluate whether procedural problems related to operations are being effectively identified and expeditiously corrected.

d. Examine the licensee's self-assessment capability as it relates to readiness for operation, including the root cause analysis process, the corrective action program, and the trending and generic applicability review of self-identified problems. Determine the adequacy of the deficiency reporting system, including thresholds, and evaluate the effectiveness of prioritization of the identified problems. Review the root cause analysis training program. Assess the involvement of QA and engineering in problem resolution.

e. Determine whether operator training, including simulator usage, includes beginning-of-life core characteristics and system response. Through operator interviews, control room observations, and the review of alarm response procedures, determine whether shift personnel are prepared to respond to abnormal plant conditions, instrumentation and control setpoint and display anomalies, and the potential for a high number of challenges to safety systems during testing.

f. Evaluate whether there is any change in the Quality Assurance (QA) program effectiveness due to the differences in the QA organizational interactions with other station departments under operational controls versus what existed when under construction controls. Verify whether program requirements exist for quality assurance/quality control (QA/QC) personnel to be present during back shifts, and assess adequacy.

g. Determine whether the licensee has implemented an effective Technical Specification Appraisal process. Verify that plant procedures accurately reflect the applicable Technical Specification sections. Verify the adequacy of administrative controls to complement startup testing activities under Technical Specification constraints, as opposed to the latitude for "troubleshooting" problems that exist under preoperational testing controls.

h. Determine whether the licensee has implemented an effective program to review and focus attention on balance-of-plant (BOP) operations to reduce the frequency and severity of plant transients.

i. Evaluate the adequacy of licensee plans to resolve material and personnel access and work control problems once the radiologically controlled areas (RCAs) and protected/vital areas are established.

j. Evaluate the status of control room annunciators, alarms, and recorders. Verify the adequacy of the licensee's methodology for compensatory measures for those indications not operating properly.

k. Evaluate the licensee's program to review and evaluate the impact of the maintenance work request backlog on operational readiness, including the collective impact on safety system availability and operability. Determine if safety-related work is being accomplished by means other than the written administrative controls (e.g., "shop tickets").

l. Review the qualifications and commercial operating experience of key managers and operators and whether organizational responsibilities and interfaces exist to support an operating unit. Determine whether the licensee has staffed the organization to levels which are capable of successfully operating and supporting the unit.

m. Review the startup testing schedule and status of completion to ensure that the startup testing committed to in the final safety analysis report (FSAR) is, or will be, actually performed. If tests are deleted or modified, ensure that an adequate 10 CFR 50.59 review was performed and forwarded to NRC for review.

n. Review the method for keeping track of entry into and exit from Technical Specification action statements. Ensure that the operators are aware of all action statements in effect and their cumulative implications.

Twenty-four-hour inspection coverage of shift operations is necessary at various times during the startup sequence. Such coverage is routinely provided during initial criticality and other periods of startup testing by regional/resident personnel in the conduct of the NRC Inspection Manual Chapter 2514 inspection program. Judgment must be exercised in balancing such benefits against the requirement for additional inspection resources to conduct around-the-clock shift coverage.

02.03 Management Meetings. Frequent NRC management meetings with licensees are recommended before and after the ORAT inspection to maximize the effectiveness of the Operational Readiness Review process. Throughout the first few months of initial commercial operation, the NRC should review with the plant management and staff the root causes of all reportable events and planned licensee corrective actions at such periodic meetings. The ORAT exit meeting should emphasize the continuing nature of the NRC readiness review process.

93806-03 INSPECTION GUIDANCE

03.01 General Guidance. Previous NRC evaluations and Office for Analysis and Evaluation of Operational Data (AEOD) studies have shown that effective management of the transition from construction to operations and of the feedback of operating experience from other plants (and similar plants) can

significantly enhance early performance. This inspection procedure provides general guidance on the scope, content, problem areas, and verifications relevant to the conduct of ORAT inspections.

ORAT inspections will emphasize the effectiveness of management oversight, corrective action programs, root cause analysis, and the readiness to support operations. The following major points should be assessed: the establishment of a basic framework of management programs to support the operation of the unit; the establishment and implementation of a program to gather and apply lessons learned from industry experience; the ability of the management team to establish a proper working atmosphere in which to operate the unit; the involvement of both site and corporate engineering in the operation of the unit; and the depth of QA involvement in plant operations and problems. For new plants it is essential that the licensee identify lessons learned from previous new plant operating experience and communicate these lessons to the senior management of the new plant. New plants that have come on line have shown significant improvement after establishing effective root cause analysis and corrective action programs. Effective station goals and actions that result from self-assessment demonstrate the readiness of the plant for safe operation and the readiness of its personnel for the conduct of the plant's safe operation.

However, one common element supports all Operational Readiness Reviews, including ORAT verification activities, and that is the fundamental need for the establishment of an appropriate operating attitude well before initial criticality. Programs that control construction completion should be phased out or merged with operational control programs in order to minimize the confusion associated with duplicate systems of controlling work. The same is also true for procedural use and personnel work assignments. Operational controls should be implemented as early as possible to allow for personnel acclimation and training.

It is also important that such operational controls, particularly in the areas of maintenance and modifications, be consistent with both the original bases of the plant design and the good work practices used during plant construction.

The planning for this inspection is an important element. Selection of the inspection team is a very important function during the planning phase. Operating experience of team members should be a primary consideration for selection, especially for the control room observations. The use of resident inspectors from similar sites and experienced regional/Nuclear Reactor Regulation inspectors should be emphasized. The inclusion of a licensing examiner may also be beneficial in evaluating operational readiness. Consideration should also be given to including a team member with expertise in management and organizational theory and/or human factors engineering, if applicable to the inspection scope. The size of the team will vary depending on the scope and duration of the inspection.

03.02 Specific Guidance

a. Inspection Requirement 02.01. The scheduling of the ORAT inspection shall be based upon the previous licensee experience and operating history as may be applied to the specific plant. An inspection of the first nuclear unit for a utility may require more lead time before the

projected fuel load date than is needed for inspections of subsequent nuclear units. The timing of the inspection must be well coordinated with other NRC and third party inspection activities, such as:

(1) Inspection Procedure 94300 status report requirements.

(2) Issuance of the proof and review copy of the Technical Specifications.

(3) Regional Office conduct of a team inspection for a Technical Specification Review in accordance with Inspection Procedure 71301.

(4) Conduct of the INPO Preoperational Assistance visit at the site.

(5) Conduct of utility self-assessment activities and availability of the resulting report(s).

Prior licensing and plant restart experience indicates that ORAT inspections can be optimally conducted about 3 months before issuance of the initial license. In the case of full-power operation for a new plant, another evaluation should be conducted 3 to 6 months after receipt of the full-power license to observe actual operational activities.

The areas of review should also be based on the previous experience of the licensee. For example, the inspection plan for the third unit in a three-unit station will differ considerably from the inspection plan for the station's first unit.

b. Inspection Requirement 02.02. For newly licensed plants, the status of the operational preparedness phase of the Preoperational Testing Program (NRC Inspection Manual Chapter 2513, Appendix B) should be reviewed to determine which inspections are incomplete and whether problems have been identified in the areas previously inspected. The NRC Inspection Manual Chapter 2513 Program Inspection Procedures that are incomplete or that resulted in identification of problems can be utilized to develop areas for review during the operational readiness team inspection. Current procedures exist in the following inspection areas, as listed in the NRC Inspection Manual Chapter 2513, Appendix B:

(1) Operations

(2) Maintenance

(3) Fuel Receipt and Storage

(4) Fire Protection

(5) Surveillance

(6) Plant Water Chemistry Controls

(7) Radiological Controls

(8) Security and Safeguards

(9) Quality Assurance

The operations phase inspection program (NRC Inspection Manual Chapter 2515) also contains inspection procedures that can be used to develop areas for further review of operational readiness. The following represent current, applicable procedures listed under the respective inspection functional areas that they support:

(1) Plant Operations

42700	Plant Procedures
64704	Fire Protection/Prevention Program
71707	Operational Safety Verification
71710	ESF System Walkdown

(2) Maintenance/Surveillance

61700	Surveillance Procedures and Records
61726	Monthly Surveillance Observation
61725	Surveillance Testing and Calibration Control Program
62700	Maintenance Program Implementation
62702	Maintenance Program
62703	Monthly Maintenance Observations
62704	Instrument Maintenance
62705	Electrical Maintenance

(3) Engineering and Technical Support

37700	Design, Design Changes, and Modifications
37701	Facility Modifications
72701	Modification Testing

(4) Safety Assessment/Quality Verification

35701	QA Program - Annual Review
40500	Evaluation of Licensee Self-Assessment Capability
92720	Corrective Action

(5) Security

81XXX	Physical Security (81000 series procedures)
81018	Security Plan and Implementing Procedures
81020	Management Effectiveness - Security Programs
8107X	Access Control (81070 series procedures)
81088	Communications

(6) Emergency Preparedness

82701	Operational Status of the Emergency Preparedness Program

(7) Radiation Controls

83750 Occupational Exposure, Shipping, and Transportation
84750 Radioactive Waste Systems; Water Chemistry; Confirmatory Measurements and Radiological Environmental Monitoring

c. Inspection Requirement 02.03. The scope of the ORAT inspection must be flexible enough to accommodate both the unique plant design and the plant inspection history, including systematic assessment of licensee performance (SALP). Thus, departures from standard nuclear steam supply system (NSSS) designs and first-of-a-kind plant features may provide areas for specific review at a new plant. Both the NRC Open Items List and the licensee's internal "punch" lists should be reviewed for planning input and to identify areas in which work may not be completed before criticality is achieved. Also, the results of past NRC team inspections at the plant should be considered not only to understand past problem areas, but also to review the effectiveness of licensee corrective action programs. The licensee's responsiveness to previously identified problems and issues provides one indicator of the licensee's progress toward developing a proper operating attitude and ensuring a high degree of readiness for conducting criticality and power operations.

Just as the scope of any Operational Readiness Review must be flexible, so must the ORAT inspection be adaptable to changes in direction and emphasis. Frequent team meetings are essential not only to identify any generic problems or concerns that may exist in the different inspection areas, but also to redirect inspection resources away from areas in which no problems are evident. Identification of acceptable areas should be made to allow the inspectors the latitude and time to thoroughly investigate the causes of identified problems. The ORAT inspection should be flexibly structured to adapt to the necessary changes in direction and scope that occur through the use of performance-based inspection techniques.

93806-04 RESOURCE ESTIMATE

This inspection is estimated to require 560 direct inspection hours of regional and headquarters resources. Actual inspections at a specific plant may require substantially more or fewer resources, depending on the inspection scope.

93806-05 REFERENCES

NUREG-1275, "Operating Experience Feedback Report - New Plants," July 1987

NUREG/CR-5151, "Performance-Based Inspections," June 1988

NRC Inspection Manual Chapters 2513 and 2515

Memorandum, J. Sniezek to Regional Administrators, dated April 23, 1987 (NUDOCS 68863/046).

END

Attachment 1

OPERATIONAL READINESS REVIEWS

I. Plant Operations

A. System Status Control and Logs
B. Organization and Staffing
C. Shift Routine and Turnover
D. Training
E. Response to annunciators and Off-normal Conditions
F. Housekeeping and Material Condition
G. Control Room Decorum
H. Reportability Requirements and Implementation
I. Communications with Interfacing Departments
J. Fitness for Duty Program
K. Overtime Controls
L. Procedure Adequacy/Adherence

II. Maintenance/Surveillance

A. Maintenance Management and Organization
B. Observation of Work Activities
C. Temporary Modifications
D. Preventive Maintenance Program
E. Failure Trending and Predictive Maintenance
F. Post-Maintenance Testing
G. Work Planning and Prioritization Processes
H. Training
I. Communications with Interfacing Departments
J. Rework Identification and Control
K. Implementation of TS Surveillance Requirements
L. Observation of Surveillance Activities
M. Procedure Adequacy/Adherence

III. Engineering and Technical Support

A. Modification Controls
B. Support to Operations and Maintenance
C. Configuration Controls
D. Interface with ALARA Program
E. Licensing Activities and Technical Specifications Management

IV. Safety Assessment/Quality Verification

A. Management Oversight Activities and Goals
B. Self-Assessment Capabilities (PORC, SORC, ISEG)
C. Quality Assurance/Quality Control Involvement
D. Corrective Action Programs
E. Post-Trip Review Process
F. Operating Experience Feedback
G. Independent Verification Policies
H. Licensee Readiness Assessment

V. Radiation Protection

A. Health Physics Organization and Staffing
B. Radiological Controls
C. Effluent/Waste Controls
D. ALARA
E. Materials and Contamination Control
F. Surveys and Monitoring
G. Respiratory Protection
F. Training

VI. Security

A. Organization and Staffing
B. Security Plan Implementation
C. Access Controls
D. Alarm Response
E. Communications
F. Training

VII. Emergency Preparedness

A. Emergency Plan and Implementing Procedures
B. Emergency Facilities, Equipment, Instrumentation, and Supplies
C. Organization and Management Control
D. Training
E. Independent Reviews/Audit

ATTACHMENT NO. 2

Attachment 2

BACKGROUND INFORMATION ON
COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

Utility: Texas Utilities Electric Company (97.8% Ownership)
(TU Electric/Applicant or Applicants)
Location: 40 miles SW of Ft. Worth, Texas
Somervell County, Texas

	Unit 1	Unit 2
Docket No.:	50-445	50-446
CP Issued:	12/19/74	12/19/74
Low Power License:	Est. 10/89	Not Scheduled
Full Power License:	~~Est.~~ 12/89	-
Initial Criticality:	~~Est.~~ 11/89	-
Elec. Energ. 1st Gener:	-	-
Commercial Operation:	-	-
Reactor Type:	PWR	Same
Containment Type:	Steel-lined, reinforced concrete	Same
Power Level:	3411 MWT; 1159 MWE	Same
Architect/Engineer:	Original - Gibbs & Hill Current - Reverification and redesign effort by Stone and Webster, Ebasco, and Impell	Same
NSSS Vendor:	Westinghouse	Same
Constructor:	Brown & Root	Same
Turbine Supplier:	Allis-Chalmers	Same
Condenser Cooling Method:	Circulating Water System	Same
Condenser Cooling Water:	Squaw Creek Reservoir	Same

Licensing Project Manager: (see Projects group below)

NRC Responsible Office: Associate Director for Special Projects, HQ
Dennis M. Crutchfield, Associate Director
(492-0722)

Comanche Peak Project Division, OSP
Christopher Grimes, Director
(492-3299)

~~Phillip McKee, Deputy Director~~
~~(492-3301)~~

CPPD Projects: Assistant Director for Projects
James Wilson, Assistant Director
(492-3306)

Melinda Malloy, LPM
(492-0738)
Mel Fields, LPM
(492-0765)

Attachment 2

CPPD Technical Review: Assistant Director for Technical Programs
James Lyons, Assistant Director
(492-3305)

CPPD Inspections: Assistant Director for Inspection Programs
Robert Warnick, Assistant Director
(817) 897-1500 CP Site

Section Chiefs: Herbert Livermore (817) 897-1500
Joel Wiebe (817) 897-1500

Senior Resident Inspectors: ~~Shannon Phillips (Construction) (817) 897-1500~~
~~Stephen Burris~~ Bill Jones (Operations) (817) 897-1500

Resident Inspectors: Michael Runyan (C/S) (817) 897-1500
Steven Bitter (Ops) (817) 897-1500
~~Clifton Hale (QA) (817) 897-1500~~
Robert Latta (Elec) (817) 897-1500

Region IV, Arlington TX: Responsible for Operator Licensing Activities, Emergency Planning Activities, and Radiation Safety and Safeguards Inspections

Robert Martin, Regional Administrator
(8-728-8225)

John Montgomery, Deputy Regional Administrator
(8-728-8226)

~~James Milhoan~~ Leonard J. Callan, Director
Division of Reactor Safety
(8-728-8183)

A. Bill Beach, Director
Division of Radiation Safety and Safeguards
(8-728-8248)

William Fisher, Chief
Nuclear Materials Safety Branch
(8-728-8215)

Blaine Murray, Chief
Reactor Programs Branch
(8-728-8126)

Donald Driskill, Director
Office of Investigations Field Office
(8-728-8110)

TU Electric Corporate Management Personnel (Dallas, Texas)

Jerry S. Farrington, Chairman of The Board
Chief Executive, Texas Utilities Co.

Erle A. Nye, President, Texas Utilities Co.
and Chairman and Chief Executive, Texas
Utilities Electric Company

William G. Counsil, Vice Chairman
TU Electric

Michael D. Spence, President
TU Electric Generating Division

TU Electric Corporate Management Personnel (Site)

William J. Cahill, Executive Vice President,
Nuclear

H. D. (Buz) Bruner, Senior Vice President
Nuclear Engineering and Operations

R. A. Werner, Manager
Safeteam

TU Electric Management Personnel - Operations (Site)

A. B. Scott, Jr., Vice President
Nuclear Operations

J. J. Kelley, Jr., Plant Manager

J. V. Donahue, Operations

B. W. Wieland, Maintenance

G. J. Laughlin, Instrumentation and Controls

M. R. Blevins, Plant Support

M. J. Riggs, Plant Evaluation

J. S. McMahon, Training

T. L. Gosdin, Administrative Services

B. T. Lancaster, Plant Services

R. Daly, Startup

D. L. Davis, Results Engineering

S. L. Ellis, Test

D. W. Stonestreet, Outage Planning

Management Personnel - CPSES Nuclear Engineering/Engineering Construction (Dallas & site)

L. D. Nace, Vice President

J. W. Beck, Vice President, Nuclear Engineering

J. B. George, Vice President, Support

R. D. Walker, Manager Nuclear Licensing

J. F. Streeter, Director Quality Assurance

A. Husain, Director Reactor Engineering

O. W. Lowe, Director Engineering

T. G. Tyler, Director Projects

D. M. Reynerson, Director Construction

W. R. Deatherage, Director Engineering Administration

J. W. Muffett, Manager of Engineering (CECO)

J. E. Krechting, Director Technical Interface

Workforce As of April 8, 1989:

Organization	Onsite	Total
Eng. & Eng. Admin.	2351	2508
Construction	3694	3694
Projects	604	619
Operations	1686	1700
Nuclear Engineering	739	841
Support Services	275	277
NEO Administration	26	45
TOTAL	9375	9684

Reactor Operators

SROs	Operating	19	ROs	Operating	24
	Staff	24		Staff	1
	Total	43		Total	25

15 SROs and 10 ROs are required to operate Unit 1

Work Shifts

6 Shift Manning Cycle
- 3 shifts working
- 1 shift in training
- 2 shifts extra and off

As reflected in current proposed Technical Specifications each shift will be comprised of the following staff:

For one unit operation:

Shift Supervisor (SRO)
- 1 Assistant Shift Supervisor (SRO)
- 2 Reactor Operators
- 5 Auxiliary Operators
- Shift Technical Advisor (SRO/STA)

For two unit operation:

Shift Supervisor (SRO)
- 2 Assistant Shift Supervisors (SRO)
- 4 Reactor Operators
- 10 Auxiliary Operators
- Shift Technical Advisor (SRO/STA)

Reactor Operator Exams Administered by the Region

Date of Exam	Number of Applicants		Passed	Failed
12/21/88*	SRO	1	1	0
	RO	0	0	0
06/06/88	SRO	7	5	2
	RO	6	3	3
12/15/87	SRO	0	0	0
	RO	5	3	2
07/13/87	SRO	8	7	1
	RO	4	4	0
09/23/86	SRO	5	3	2
	RO	7	6	1
04/01/85	SRO	2	2	0
	RO	5	4	1
09/11/84	SRO	5	4	1
	RO	17	8	9
04/03/84	SRO	12	7	5
	RO	13	8	5
07/18/83	SRO	29	23	6
	RO	10	3	7
Totals		136	91	45

Requalification Exams Administered by the Region

Date of Exam	Number of Applicants		Passed	Failed
09/23/86	SRO	14	10	4
	RO	7	3	4
04/01/85	SRO	7	4	3
	RO	3	2	1
Totals		31	19	12

Next Examination Scheduled for: July 3-7, 1989 Requalification Exams

Number of Applicants:		
	SRO	8
	RO	4
Total		12

* This was a retake exam including the "Administrative Topics" and "Control Room Systems/Facility Walkthrough" sections of the operating exam.

Allegations (continued)

The staff has received 45 allegations since the formation of OSP. As of May 15, 1989, 10 allegations remain open. All of the allegations have been reviewed by the CPPD Allegation Review Committee to establish the necessary follow-up action required for closeout. All totaled, approximately 130 allegers have reported concerns about Comanche Peak.

Emergency Preparedness

The staff documented its review of Revision 8 (FSAR Amendment 48) to the Emergency Plan in SSER 6 (11/84). On the basis of a review of the Applicant's Emergency Plan against the (1) Planning Standards of 10 CFR 50.47(b), (2) requirements of Appendix E to 10 CFR 50, and (3) guidance criteria in NUREG-0654, Revision 1 (11/80), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (Regulatory Guide 1.101, Revision 2), the staff concluded that the Emergency Plan for CPSES Units 1 and 2 provides an adequate planning basis for an acceptable state of emergency preparedness and meets the requirements of Appendix E to 10 CFR 50. The Applicant provided Revision 9 to the Emergency Plan in FSAR Amendment 58 (6/86) and with Revision 10 (8/88), the Plan was separated from the FSAR and will be maintained as an independent report. The staff's review of the changes to the Plan was completed in February 1989 and affirmed the staff's prior conclusions on the plan's acceptability.

In addition to the Emergency Plan review, the staff completed an appraisal (September 6 through October 7, 1983) of the Applicant's implemented emergency preparedness program (Inspection Reports 50-445/83-33 and 50-446/83-17 dated February 8, 1984). Also, the Applicant's performance was observed during a full-participation exercise (December 12-15, 1983) with participation by the applicant, the State of Texas, and Hood and Somervell Counties (Inspection Reports 50-445/83-46 and 50-446/83-21 dated January 23, 1984).

By memorandum dated November 29, 1984, FEMA provided findings based on the review of the original and revised offsite Emergency Plans and the results of the December 14, 1983, full-participation exercise. FEMA determined that:

> offsite radiological emergency plans and preparedness for the Comanche Peak Steam Electric Station have been determined to be adequate. Consequently, there is reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public living in the vicinity of the Comanche Peak Steam Electric Station.

Plant Simulator

The simulator was operational in 1985 and is Comanche Peak Plant specific. It is located in the Nuclear Operations Support Facility on-site and the vendor is Singer-Link.

Systematic Assessment of Licensee Performance (SALP)

The SALP process was suspended in February 1985, because of the TRT and Region IV special attention. The SALP process was resumed by the NRC for the period September 1, 1987 through August 31, 1988. The final SALP report (see Attachment 3), Inspection Report 50-445/87-40 and 50-446/87-31, was issued on December 9, 1988.

Overall, the recent SALP concluded that, while there have been some deficiencies in the complete implementation of Comanche Peak programs, TU Electric has established a solid foundation for excellent performance.

Escalated Enforcement Actions

On February 28, 1989, the staff cited TU Electric with a Level III Violation (EA-88-278) for failure to submit a timely application for extension of the Unit 1 construction permit. No civil penalty was imposed in consideration of the applicant's extensive corrective action programs, the age of the violation, and overall safety significance of the violation.

Investigation/Allegations Status

OI Investigations

OI has issued 14 investigation reports, 29 inquiries and 5 assists to Region IV. Areas include welding, QC, electrical, inspections, intimidation, procedures, management, NCRs, coatings, pipe hangers, firings, falsification of records, and construction practices. OSP/CPPD has referred 5 requests for investigation to OI. OI currently has 1 open investigation.

Allegations

Slightly over 1,000 allegations have been received by the staff on Comanche Peak. The evaluations of the majority of them (approximately 600) were documented by the NRC's Technical Review Team in SSERs 7-11 in the following areas: electrical/testing, civil, protective coatings, mechanical, and QA/QC. Approximately 200 allegations (received after the SSERs mentioned above were issued, but before September 15, 1985) in the areas of electrical, civil, mechanical, and QA/QC have been evaluated and documented. The QA/QC allegations were closed out in inspection reports, and the electrical, civil, and mechanical allegations are addressed in SSERs 14-20. From September 15, 1985 until the formation of the Office of Special Projects (OSP) in February 1987, Region IV processed construction and QA/QC-related allegations; 14 allegations were received during this time period. All of the allegations received prior to the formation of OSP have been closed.

The staff has reviewed the FEMA findings and determined that they support the staff's recommendation that there is an adequate state of onsite and offsite emergency planning and preparedness for full-power licensing for the Comanche Peak Steam Electric Station.

In a subsequent letter dated July 15, 1985, FEMA transmitted its findings and determination in accordance with the FEMA rule (44 CFR 350). FEMA determined that:

> the Texas State and local plans and preparedness for the Comanche Peak Steam Electric Station are adequate to protect the health and safety of the public in that there is reasonable assurance that the appropriate protective measures can be taken offsite in the event of a radiological emergency. The adequacy of the public alert and notification system has also been verified by FEMA in accordance with the criteria in FEMA rule 44 CFR 350; Appendix 3 of NUREG-0654/ FEMA-REP-1, Rev. 1; and the "Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants" (FEMA-43).

Further, consistent with the Commission's Statement of Policy regarding arrangements for offsite emergency medical services, the Applicant, by letter dated February 20, 1986, confirmed that the Emergency Plans of the involved offsite response jurisdictions contain a list of medical service facilities. The existence of such a list in the pertinent plans has also been confirmed by FEMA. Further, the Applicant has committed to fully comply with the Commission's final response to the Court's remand.

The last full-participation exercise was conducted in November 1984. A full-participation emergency exercise is scheduled for July 25-26, 1989. In a letter to FEMA dated March 24, 1989, NRC requested FEMA to (1) provide its evaluation of the upcoming 1989 full-participation exercise, (2) confirm that any revisions to the State and local plans since 1984 have not degraded the effectiveness of those plans, and (3) confirm that the emergency plans of the involved emergency response jurisdictions meet current regulatory requirements and guidance.

Emergency Response Facilities

The Applicant's Emergency Plan and Emergency Response Facilities (ERFs) provide for a Technical Support Center (TSC) which is separate from the Control Room but located adjacent to and above it. The TSC has the capability to display and transmit data and data summaries describing plant status to the Control Room and the Emergency Operations Facility (EOF). There is space in the TSC for management and technical personnel to perform their functions. The radiological habitability of the TSC is the same as the Control Room and communications are provided between the Control Room, the Operational Support Center (OSC), the EOF, the NRC, and other offsite agencies. The use of semi-portable continuous monitoring instrumentation is available to determine dose rate and radioactivity levels in the TSC.

The TSC appears to be capable of supporting reactor control functions, evaluating and diagnosing plant conditions, and serving as the main communications link between the Control Room, the OSC, the EOF, and the NRC. The TSC can carry out the EOF functions until the EOF is staffed.

Emergency Response Facilities (continued)

The Comanche Peak OSC is presently located in the Maintenance Building and provides a place where operations support personnel can assemble and report in an emergency as well as receive instructions from the operating staff. With Revision 10 to the Plan, the OSC is being relocated to the Radiation Control Access Office; the Maintenance Building will serve as an alternate OSC. The OSC has communications with the Control Room, the TSC, and the EOF.

The EOF is attached to the Nuclear Operations Support Center which is located within 1.2 miles from the Comanche Peak Steam Electric Station and has a Protection Factor of greater than 15. An alternate EOF is provided in Granbury (10 miles). There is space in the EOF for management and technical personnel to perform their functions. There are communications links between the EOF and the Control Room, the TSC, the OSC, the NRC, and other offsite agencies. The EOF appears to be capable of coordinating all the Applicant's onsite and offsite activities for reactor emergency situations.

In SSER 3 (3/83) and 6 (11/84), the staff concluded that the Applicant's emergency facilities and equipment are adequate to meet the requirements of 10 CFR 50.47 and Appendix E to 10 CFR 50 on an interim basis, subject to an onsite post-implementation review. This onsite post-implementation review will also be used to determine the adequacy of the final ERFs in accordance with the requirements and procedures given in Supplement 1 of NUREG-0737.

Significant Licensee Accomplishments

The development and implementation of the Corrective Action Program (CAP) for design and construction deficiencies typifies the aggressive and thorough approach that TU Electric management applies to safety issues. TU Electric's commitment to excellence is evident in their improvements to the security systems and emergency preparedness facilities. This commitment is regularly demonstrated by TU Electric managers, several of whom are former NRC employees, but not always by the working staff.

Plant Status

Schedule

In March 1989, the Applicant formally announced that the current schedule for Unit 1 fuel loading is "three months behind [our] ... mid-1989 schedule" which was announced in March 1988. Based on current construction activity schedules, TU Electric estimates that Unit 1 will be ready to load fuel in October 1989. Unit 2 construction was suspended in March 1988. TU Electric estimates that the Unit 2 fuel load date will be approximately two years after Unit 1 fuel load.

Plant Status (continued)

Hearing Status

Comanche Peak has been a heavily contested proceeding since 1981. On July 1, 1988 the Applicant, intervenor (Citizens Association for Sound Energy), and the NRC staff filed a Joint Motion for dismissal of the proceedings based on a Joint Stipulation describing the terms of a settlement agreement under which CASE President, Ms. Juanita Ellis, would become a member of the Operations Review Committee and TU Electric would compensate whistleblowers. The Joint Motion applied to the admitted contentions in both the OL and Unit 1 construction permit amendment (CPA) proceedings. At a special prehearing conference on July 13, 1988, the ASLB issued a Memorandum and Order dismissing the proceedings.

On August 11, 1988, the Citizens for Fair Utility Regulation (CFUR) filed, with the ASLB, a Request for Hearing and Petition for Leave to Intervene in both the OL and CPA proceedings in place of CASE. That petition was denied by the Commission in CLI-88-12. Mr. Joseph Macktal filed a motion on December 30, 1988 requesting the Commission to reconsider CLI-88-12, and CFUR petitioned the U. S. Court of Appeals for the Fifth Circuit in New Orleans on February 15, 1989 to review the decision. On January 19, 1989 Mr. Macktal filed a motion before the U. S. Court of Appeals for the D. C. Circuit to overturn CLI-88-12, which the Commission has moved that the Court dismiss. His December 30, 1988 motion was denied by the Commission on April 20, 1989 (CLI-89-06).

AEOD Analysis of Operational Data

N/A

NRR Operating Reactor Assessment

N/A

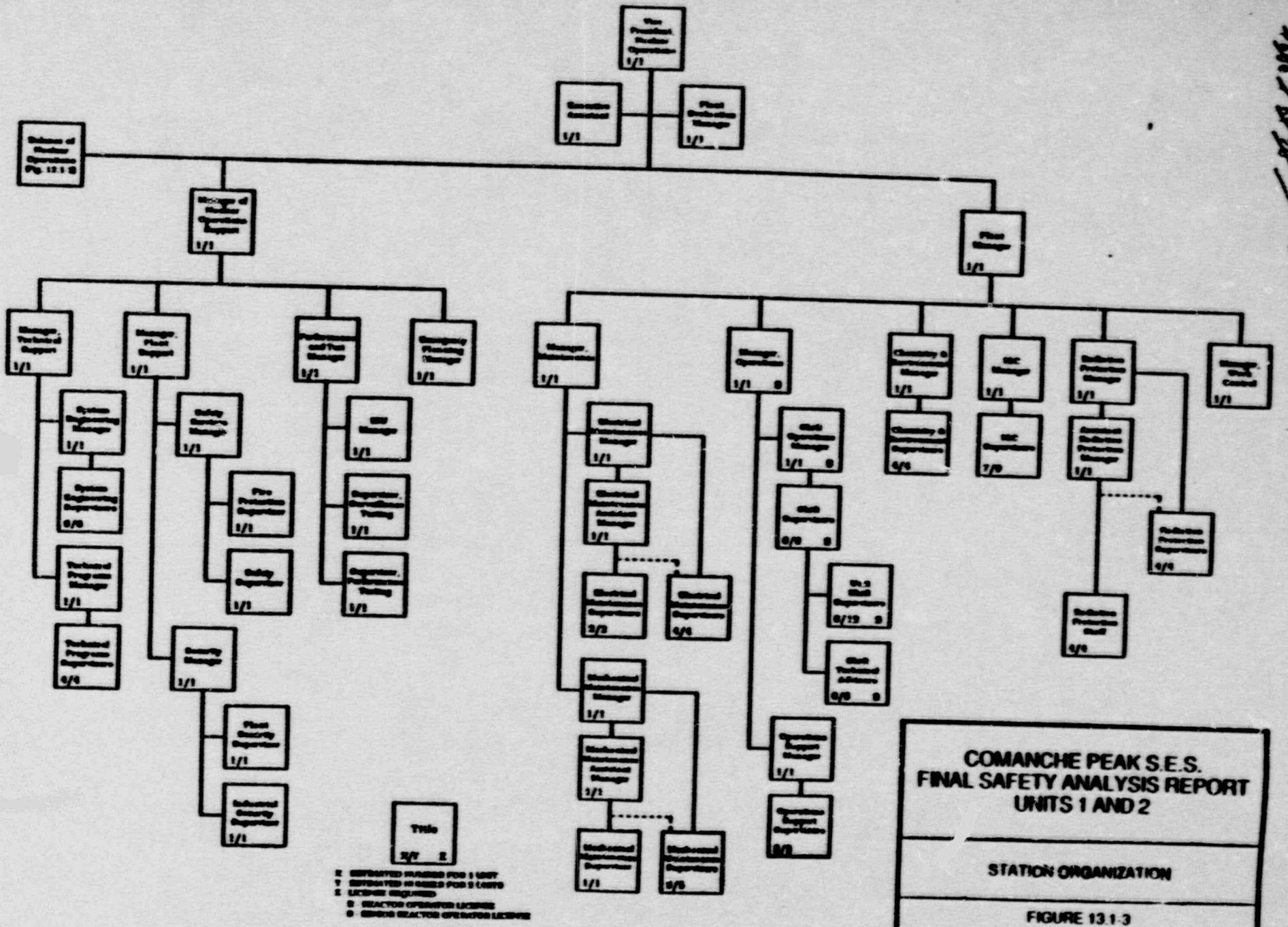
Public Issues

Except for the safety issues associated with the hearings, public sentiment in the Dallas and Fort Worth area, as reflected in newspaper articles, editorials and television news, is principally concerned with the plant's cost increases and the state's energy balance.

Attachments

1. Figures
2. Most Recent SALP Report (Inspection Report 50-445/87-40 and 50-446/87-31 dated October 21, 1988)

ATTACHMENT NO. 3



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

STATION ORGANIZATION

FIGURE 13.1-3

DRAFT | Resumes of the key TU Electric/CPSES personnel in the following order:

DRAFT	Larry G. Barnes	Shift Operations Manager
DRAFT	John W. Beck	Vice President, Nuclear Engineering
DRAFT	Michael R. Blevins	Manager of Nuclear Operations Support
DRAFT	Dudley M. Bozeman	Chemistry and Environmental Manager
DRAFT	H. D. Bruner	Senior Vice President
DRAFT	William J. Cahill, Jr.	Executive Vice President, Nuclear
DRAFT	Richard Daly, Jr.	Manager, Startup
DRAFT	Doug L. Davis	Manager, Technical Support
DRAFT	David E. Deviney	Deputy Director, Quality Assurance
DRAFT	Joseph W. Donahue	Manager, Operations
DRAFT	Stephen L. Ellis	Performance and Test Manager
DRAFT	Joe B. George	Vice President, Support
DRAFT	Phillip E. Halstead	Manager, Quality Control
DRAFT	Chuck Hogg	Chief Engineer
DRAFT	Ausaf Husain	Director, Reactor Engineering
DRAFT	James J. Kelley, Jr.	Plant Manager
DRAFT	John E. Krechting	Director, Technical Interface
DRAFT	Bobby T. Lancaster	Manager, Plant Support
DRAFT	G. Jay Laughlin	Instrument and Controls Manager
DRAFT	Owen W. Lowe	Director of Design Engineering and
DRAFT		Configuration Control
DRAFT	David R. Moore	Manager, Work Control
DRAFT	James W. Muffett	Manager of Engineering (CECO)
DRAFT	Robert J. Prince	Assistant Radiation Protection
DRAFT		Manager
DRAFT	Michael J. Riggs	Plant Evaluation Manager
DRAFT	Eric J. Schmitt	Radiation Protection Manager
DRAFT	Austin B. Scott	Vice President, Nuclear Operations
DRAFT	Peter B. Stevens	Manager of Operations Support
DRAFT		Engineering Group

ATTACHMENT NO. 4

1. Operators and startup failure to follow procedures. Valving errors to start the 2 backflow events, PT-0102, PT-3701, and PT6403

2. Operators' lack of sensitivity to the position of valves. Changing the AFW valves out of the proper order of sequence.

3. Operators' failure to recognize the significance of the checkvalve backleakage during the precursor event.

4. Operators' failure to make sure supervision was aware of the 3 check valves that had significant backleakage (precursor event).

5. Supervisors' failure to stay informed of plant evolutions and problems (the system flushing to solve the chemistry problem and the RHR valving problem during the remote shutdown test. If checkvalve had failed, it would have put RCS water to the RWST.)

6. Failure to accurately and adequately document the extent of a problem. (The precursor event Work Request said "repair check valve leakage.") No TDR on RHR event. No TDR on PT 4401 and QA person doing surveillance did not issue a surveillance deficiency.

7. Weakness in the documentation of equipment problems in the shift log.

8. Failure to recognize inoperable equipment.

9. Failure to recognize and document equipment out-of-service.

10. Lack of adequate communications between the operating shifts.

11. Weakness in the exchange of information at shift turnover. (Precursor event and April 23 event)

12. Supervision/Management review of problems documented on work requests. (Precursor event)

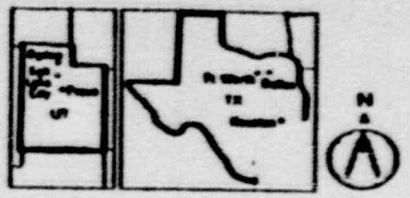
13. Failure of persons with knowledge of the precursor check valve problems to raise the information to management.

14. The slowness and lack of direction initially demonstrated by TUE following the April 23 event.

15. The perception that "Projects and the Schedule" were driving decisions at the time of the precursor event and the start of HFT.

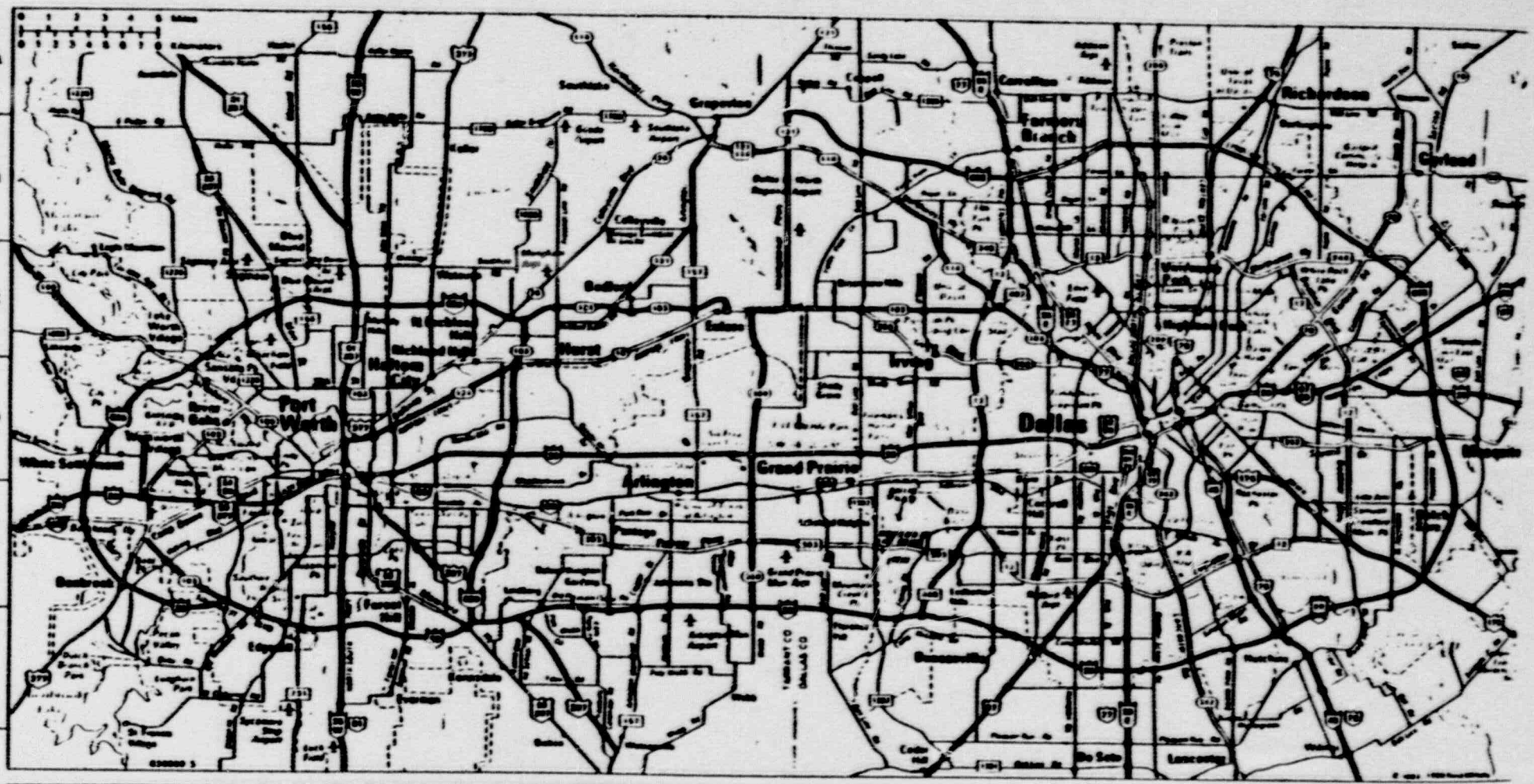
16. The perception that the Operations staff are not in control of the plant.

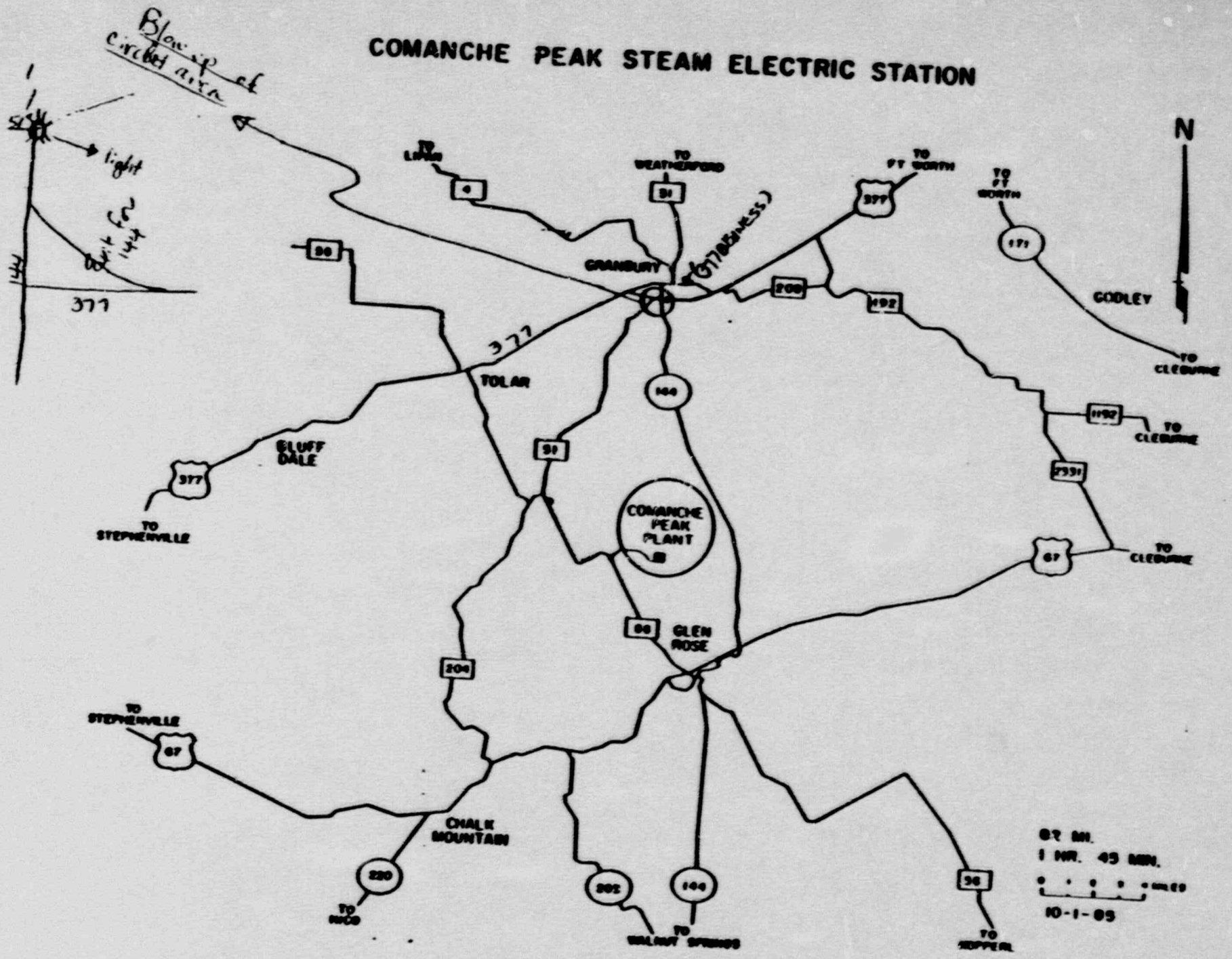
ATTACHMENT NO. 5

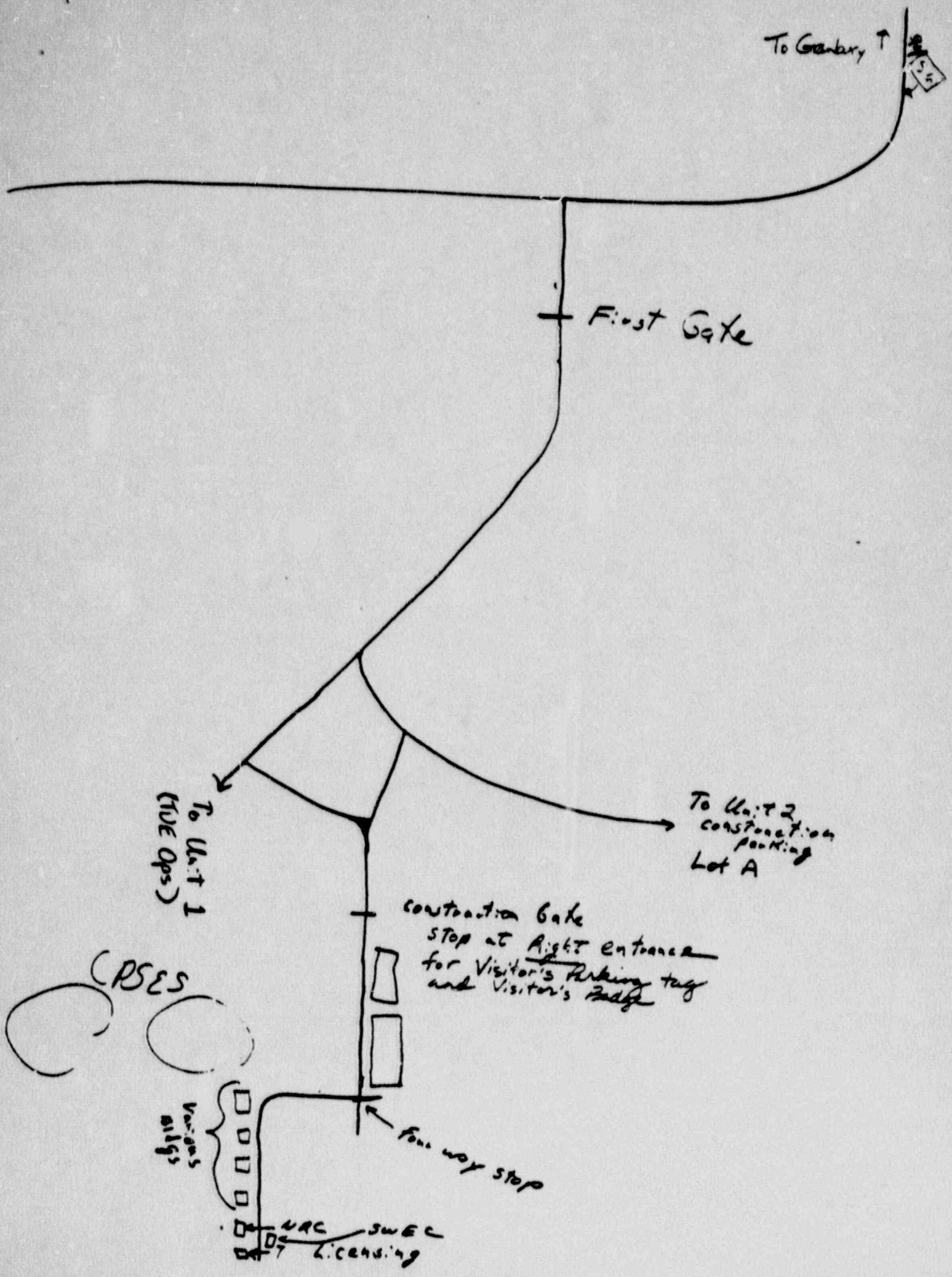


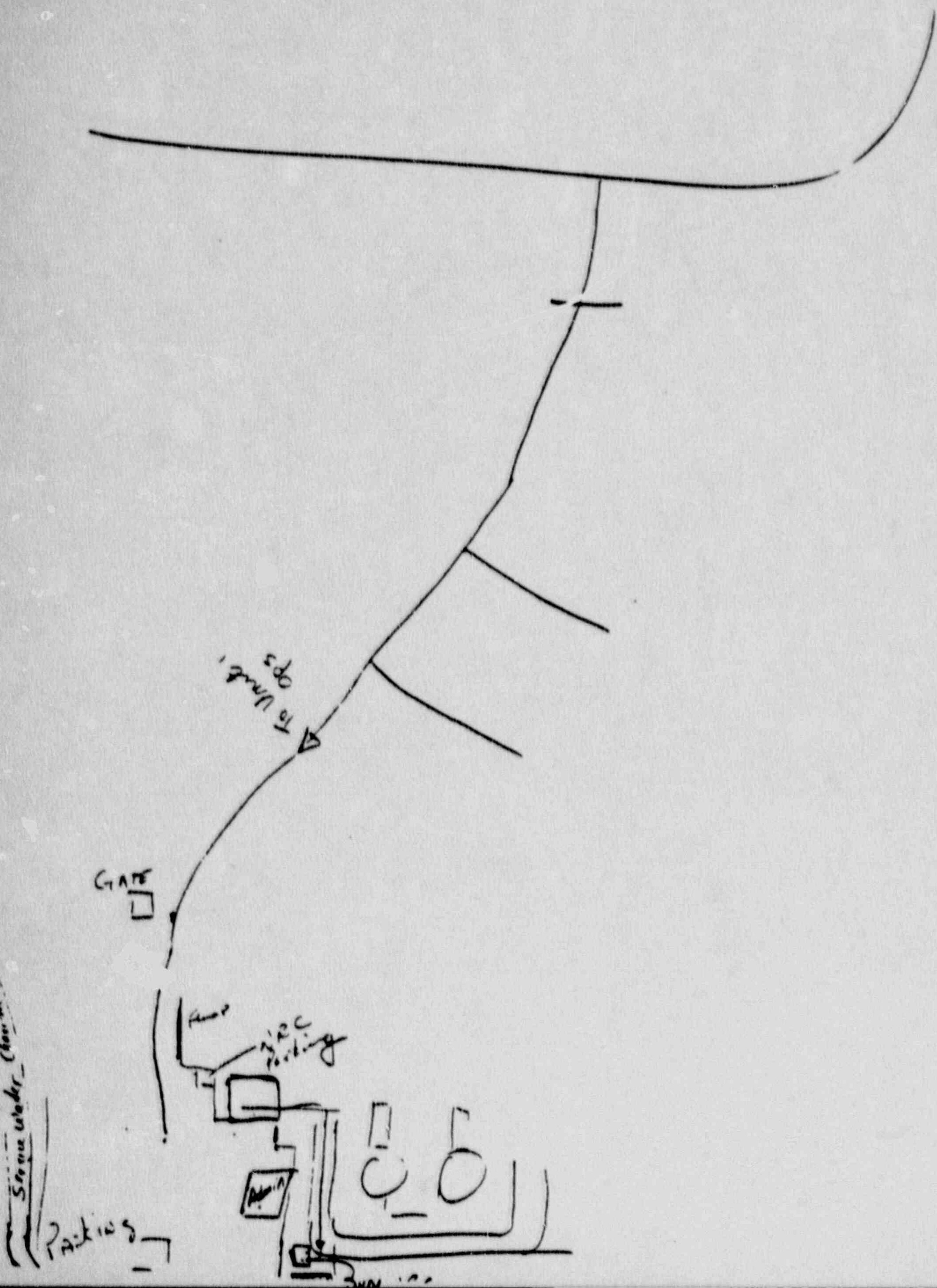
Selected Recreational & Historical Sites

Alley Theater (Houston) K 3
Arboretum & Botanical Garden (Houston) J 3
Arlington Stadium (Arlington) D 6
Astrodome & Astroworld (Houston) K 3
Bayou Bend Collection (Houston) J 3
Brigham Young University (Provo) D 11
Cotton Bowl (Dallas) D 10
Dallas Ft. Worth Regional Airport B 6
Hermann Park (Houston) K 4
Museum of Fine Arts (Houston) K 4
NASA Space Hall of Fame (Houston) N 2
Ogden Depot (Ogden) N 7
Pioneer Museum (Provo) D 11
Pioneer Trail State Park (Salt Lake City) I 12
Salt Palace (Salt Lake City) I 10
Six Flags Over Texas (Arlington) D 6
Tabernacle Square (Ogden) N 7
Temple Square (Salt Lake City) I 10
Texas Stadium (Irving) C 8
Texas State Fair Park (Dallas) D 10
Utah Lake State Park (Provo) D 9
Utah State Capitol (Salt Lake City) H 10
Utah State Fairgrounds (Salt Lake City) I 9
Will Rogers Memorial Center (Ft. Worth) B




COMANCHE PEAK STEAM ELECTRIC STATION
Blow up of circled area
light
Dirt Rd
144
377
TO LAMPASAS
TO WEATHERFORD
TO FT WORTH
TO FT WORTH
TO GLEN ROSE
GRANBURY
377
TOLAR
ELUFF DALE
TO STEPHENVILLE
COMANCHE PEAK PLANT
GLEN ROSE
TO CLEBURNE
TO CLEBURNE
TO CLEBURNE
TO STEPHENVILLE
CHALK MOUNTAIN
TO RIO
TO WALNUT SPRINGS
TO STRIPPER
N
67 MI.
1 HR. 45 MIN.
10-1-85


To Granby
55
First Gate
To Unit 1
(WE Ops)
To Unit 2
construction
parking
Lot A
construction Gate
Stop at Right entrance
for Visitor's Parking tag
and Visitor's Badge
(PSES
various
bldgs
four way stop
UAC
SWEC
Licensing


GATE
NRC Parking
Storm water channel
Parking