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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 30, 1984

MEMORANDUM FOR: Regional Administrators
Director, Office of Inspection and
Enforcement
Director, Office of the Executive Legal
Director
Director, Office of Nuclear Material
Safety and Safeguards
NRR Division Directors

FROM: Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

SUBJECT: OL REVIEW MANAGEMENT REPORT

Enclosed is the OL Review Management Report for the month of July 1984. For the most part, the information in this report reflects the status of the subject plants as of June 30, 1984. All the inputs for this report were reviewed by the applicable DL Project Manager. Therefore, if warranted and the information were readily available, some portions of the report were updated beyond the June 30, 1984 cutoff date.

Unfortunately, not all portions of this report could be updated because inputs were not received from all cognizant organizations. If the report is to be useful, it must be reasonably current. This month's report falls somewhat short of this goal. It is imperative that updates be conscientiously prepared and submitted on an expedited basis. You are requested to provide a markup of the enclosed report directly to Gary Meyer of my staff, no later than August 15, 1984.

Frank J. Muragha
for Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Enclosure: As stated

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LICENSING STATUS OF GRAND GULF 1

Grand Gulf Unit 1 was issued a low power (5%) license on June 16, 1982. Fuel loading was carried out in July through early-August 1982 and the plant achieved initial criticality on August 18, 1982. The licensee undertook an extended outage from October 1982 until September 1983 upon discovery of inadequate drywell cooling following non-nuclear heat up. Activities that were completed during this outage included installation of additional drywell cooling capacity, resolution of deficiencies in surveillance procedures and technical specifications, modifications to a number of plant systems originally on a schedule for completion during the first refueling outage.

Unit 1 returned to criticality on September 25, 1983, to resume low power testing which was completed up to 5% power on November 8, 1983. At the conclusion of low power testing, the licensee began a recertification program for the licensed operators. This program resulted from a Region II inspection as a follow-up on reported discrepancies in the operator qualification cards. The program was completed in late February 1984 and on the basis of a follow-up inspection, Region II has approved the status of licensed operators (with some specific exceptions). There are now sufficient approved licensed operators to support five shift operation.

On April 18, 1984, the NRC issued an Order which required the incorporation of certain changes into the plant's Technical Specifications prior to the unit being operated at a power level of up to 5%. Upon completion of the Order's specified actions regarding training and procedure revisions associated with the prescribed Technical Specification changes, Unit 1 was taken critical on April 22, 1984.

The unit accumulated 22 days of critical operation, (at power levels up to 5%), from April 22, 1984 until June 1, 1984, when it was shut down by the licensee over concerns on the 30 day water supply to the standby service water system (SSW). During this time frame, while taking advantage of the neutron flux to rejuvenate the startup sources, the licensee re-performed low power testing on systems that were modified during the last outage, effectively recovered from the April 30, 1984 "B" RHR pipe crack event and associated hanger problems, and commenced the disassembly/inspection of the Division I diesel, (as required by the NRC order issued on May 22, 1984). Currently, the unit is in a maintenance outage while the SSW deficiency is being resolved. The two SSW cooling tower basins together have capacity for 30 days post accident operation without makeup. However, a loss of offsite power with a single failure would prohibit the required transfer of water from basin to basin. A passive siphon transfer is being installed and the design is being reviewed by the staff.

FSAR REVIEW (FULL POWER LICENSING)

1. TDI Diesel Generators

Grand Gulf has standby emergency diesel generators manufactured by Trans-america Delaval Incorporated (TDI). As a result of a crankshaft failure in a TDI unit at Shoreham in August 1983, the staff performed an in-depth evaluation of the manufacturing and performance history of the TDI units at nuclear and non-nuclear facilities.

A large number of operational problems were identified and quality assurance deficiencies were noted at the manufacturing plant. Taken together, these problems significantly reduced the staff's level of confidence in the reliability of all TDI diesel generators.

The licensee is pursuing resolution of this issue in two ways. First, they have joined a TDI Owner's Group, and jointly are engaged in a program to address the problem areas needing resolution to restore confidence in the TDI diesels. The staff was provided the details of the Owner's Group program on February 24, 1984. Plant specific details will be provided after the staff has approved the Owner's Group program. Second, the licensee has undertaken an enhancement program to improve the reliability of the onsite/offsite power system at the facility while awaiting resolution of the TDI issue. The staff was provided the details of the enhancement program in a submittal dated February 26, 1984. A review is presently being performed of MP&L's letter dated April 18, 1984, which addresses the NRC staff's concerns about this program which were discussed in a meeting with the licensee on April 5, 1984. Subsequent meetings on April 13 and 18, 1984, were held with MP&L to discuss TDI diesel generator reliability issues. Unable to conclude that the TDI diesel generators are sufficient to support operation of Grand Gulf Unit 1 at power levels in excess of 5% of full power, the NRC (in a letter dated April 25, 1984) requested additional engine disassembly and inspection. On May 22, 1984, NRC issued an Order requiring the disassembly and inspection of the Division 1 diesel engine. Included in the Order were interim technical specifications which covered the gas turbines. The engine has been inspected and no major problems were found.

2. Technical Specifications

On numerous recent occasions the licensee met with the staff to discuss their current program to perform a complete review of the Technical Specifications. This review resulted from the re-review of the Technical Specifications by the staff and the licensee. Significant discrepancies were discovered which required resolution prior to proceeding with full power licensing. The results of the current program were presented to the staff on April 4, 1984. Approximately 400 problem areas have been identified. The staff met on an almost daily schedule with the licensee to assist in the resolution of these problems. The licensee initiated the submittals for the proposed changes to the Technical Specifications on May 24, 1984. The staff has reviewed these submittals and is preparing a supplement to the SER.

HEARINGS

The Grand Gulf OL proceeding was uncontested. A low power license for Unit 1 was issued in June 1982. Five weeks later, a single petition to intervene by the State of Louisiana was filed seeking to raise issues regarding the environmental impact of the nuclear fuel cycle. The petition was denied by the Licensing Board and the denial was affirmed by the Appeal Board.

In addition, there is an OL amendment proceeding pending. The amendment involves changes to Technical Specifications on operability range for high pressure core spray, automatic tripping of RHR jockey pumps and one time exceptions to ADS trip system surveillance requirements and scram discharge volume surveillance requirements to allow startup testing. The amendment was issued September 23, 1983, after the staff made a final no significant hazards consideration finding. A petition to intervene on the amendment was filed by Jacksonians United for Livable Energy Policies (JULEP). Contentions were filed on February 15, 1984 with a prehearing conference held on February 29, 1984. In order issued on April 23, 1984, Petitioner was admitted as a party and the 2 contentions involving one-time exceptions to the ADS trip system and scram discharge volume surveillance were admitted for litigation. Discovery has commenced and status reports on hearing preparation and suggested dates for hearing are to be filed August 1, 1984. JULEP also petitioned the Commission on March 29, 1984, to institute a proceeding pursuant to 2.206(a), requesting revocation of the low power operating license and denial of a full power operating license for Grand Gulf Nuclear Station Unit 1. This show cause petition is presently under NRR Review.

NRC INSPECTIONS

The preoperational and power ascension inspection program has been implemented and is current at Grand Gulf. In addition to the normal Inspection Program, special inspections to assess the effectiveness of adherence to procedures, the utilization of consultants and advisors, and the level of compliance with regulatory requirements and license conditions have been conducted to assess the operational readiness of the facility for full power licensing. These have included: (1) Low Power Test Results; (2) Surveillance Procedures/Technical Specifications; (3) Licensed Operator Qualifications; and (4) Facility Performance. The results are summarized below:

1. Low Power Test Results

Preoperational and acceptance test results were reviewed by on-site inspection. Only four tests were not closed by the inspection staff. One test, "Isophase Bus Ventilation Heat Load" cannot be completed until the plant achieves 100% power, in that the test requires full electrical output to demonstrate acceptability. One test, "Balance of Plant Piping Expansion Monitoring" has been judged sufficiently complete for proceeding to operation above 5% power. Two tests, "Balance of Plant Piping Vibration Monitoring" and "Transient Test Equipment Verification" will be reviewed after the licensee has completed their evaluation of the results. The results of low power testing, that was recently re-performed, will also be reviewed when they become available.

2. Surveillance Procedures/Technical Specifications

Corrective actions have been initiated by MP&L and the NRC staff to correct specific and generic problems associated with the Technical Specifications

and surveillance testing which the staff identified during the period of October 1982 to December 1983. NRC staff members have met with MP&L management on numerous occasions to ensure that corrective actions taken by MP&L were commensurate with the magnitude of the related problems and that such actions are implemented in a time frame that will minimize their impact on the public.

As stated previously, approximately 400 problem areas were identified during the Technical Specification review conducted by the licensee, consultants and the IIRC. Uncertainties raised from some of these problem areas resulted in the issuance of an April 18, 1984 Order, which required changes to selected Technical Specifications to prevent the potential for undue risk to the public from operation of the facility up to 5% power. Although the remainder of the problem areas did not require a resolution prior to operation at a power level of up to 5%, they will be corrected prior to issuance of a full power license. On-site inspections of surveillance procedures have been completed. The procedures are considered to be adequate.

3. Licensed Operator Qualifications

The program to recertify licensed operators included an extensive examination and evaluation by the utility of all licensed operators and training in the areas of identified weaknesses. This specific program began in November 1983, and was completed in February 1984. The recertification program included an individual walk-through oral examination of each licensed operator on each of the systems listed on the Grand Gulf licensed operator qualification card. These examinations were monitored by Mississippi Power and Light, representatives of two other utilities, the Nuclear Steam Supply vendor (General Electric), and the NRC. At the completion of this examination process, the records of the licensed operators were reviewed by a Grand Gulf recertification board consisting of plant management. The board examined operator training records and the results of the examinations, and orally examined operators as necessary.

Upon completion of licensee recertification process, the NRC independently re-examined all licensed operators. Twenty-three of the twenty-six operators examined by NRC passed. The twenty-three operators provide sufficient staff for full power operation. The three operators who failed were removed from licensed duties as confirmed by NRC letters dated February 29 and March 23, 1984. Two of these three operators, plus two additional operators who were not recertified previously, were re-examined by the NRC during the week of June 4, 1984, passed the NRC exam and are performing license duties. Grand Gulf, therefore, has 27 licensed operators as of June 1984.

4. Facility Performance

The level of NRC inspection activity at Grand Gulf continues to be approximately 200% of previously budgeted hours. The inspections have concentrated in those functional areas rated as Category 3 during the last SALP period, September 1, 1982 - September 30, 1983. Our special assessment of the performance since that time is summarized below:

- a. Plant Operations - The first period of actual operation at criticality up to 5% power was limited to conducting the low power test program, which began on September 25, 1983, and terminated on November 8, 1983. During this first period of time, the plant was critical for 995.3 hours. Low power operation and testing continued throughout October 1983 and was witnessed by various Region II inspectors. In the judgement of Region II, these operations were conducted in a safe, deliberate and professional manner, and were very successful. Only three unplanned scrams, of minor significance, occurred during this period. That number is less than typical for facilities in this phase of startup. The plant was restarted on April 22, 1984, and logged 22 days of critical operations until the licensee shut the plant down on June 1, 1984, upon their discovery that the full 30 day water supply to the SSW would not be available during the worst postulated accident. This second period of low power operation was utilized to re-perform testing on systems that were modified during the last outage, as well as to rejuvenate the startup sources. Additionally, actions taken by the operating staff during this period when confronted with several loss of reactor feed occurrences, as well as the "B" RHR pipe crack event of April 30, 1984, demonstrated their competency.

MP&L has taken significant actions, which are responsive to correct areas of concerns that were identified in the SALP report. Some of the actions taken are:

- (1) Completed a major operator recertification program and 27 licensed operators successfully passed the subsequent NRC recertification examination. The recertification program is described in Region II meeting summary dated November 23, 1983, which documents MP&L's November 18, 1983 presentation of the program to Region II.
- (2) Implemented an extensive Operational Enhancement Program, which among many other items required sensitization of operators to meticulously comply with regulatory requirements, including compliance with procedures. This program is described in the March 11, 1983, letter AECM-83/0177 from MP&L to Region II.

- (3) Conducted system and simulator training of Shift Advisors and Shift Technical Advisors. These advisors underwent written examination and review of their performance and experience by the plant's Operator Training Evaluation Board.
 - (4) Completed a comprehensive review of Technical Specifications with identification and planned resolution of all known discrepancies. The program is described in MP&L letter AECM-84/0183 to NRR.
 - (5) Management plant personnel changes involved replacements of both the Plant Manager and the Assistant Plant Manager for Operations, with individuals having previous nuclear commercial operating experience. The plant organization has been restructured to incorporate three Assistant Plant Managers for better management control.
- b. Maintenance - Management meetings have been conducted with the highest level of corporate executives to relate NRC concerns for the control of maintenance activities. Licensee activities have included providing specialized training for maintenance personnel in the areas of diesel generators, control rod drive mechanisms and instrumentation and control. During recent months, the staff has noted increased actions on the part of both plant and corporate management to affect corrective actions. Personnel changes have been made recently in maintenance supervision. The staff expects significant improvements in this area. Recent performance by the maintenance staff in response to a pipe crack on an ancillary RHR line and modification of air supply to the drywell air locks for seismic concerns were well handled.
- c. Surveillance Procedures - As stated in paragraph 2 above, there has been significant improvement in this area.
- d. Quality Assurance

The Grand Gulf QA program is considered better than average. However, there are indications of lack of effectiveness as evidenced by a large number of problems recently identified at Grand Gulf. The deficiencies identified in the last SALP report have been addressed by MP&L Management. The licensee has stated that activities are in progress for improvement. Recent NRC inspections have verified that some direct observation of field activities by QA is occurring. However, it is felt that further increase in this area by QA is warranted. Region II held a management meeting with MP&L on May 10, 1984 to discuss the depth and scope of Quality Assurance audits. Region II will continue to observe this area for anticipated improvement.