

MAY 09 1988

Docket No. 50-289

GPU Nuclear Corporation  
ATTN: Mr. H. D. Hukill  
Vice President and Director of TMI-1  
P. O. Box 480  
Middletown, Pennsylvania 17057

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP) Report No.  
50-289/86-98

This letter transmits our final SALP Report for Three Mile Island Unit 1. As in the past, our overall assessment is that the plant continues to be operated in a safe manner, with well established programs, a highly competent staff, and is being maintained in good material condition.

The SALP evaluation for Three Mile Island Unit 1 for the period of November 1, 1986 through October 31, 1987, was initially forwarded to you by our February 11, 1988 letter (Enclosure 1). This SALP evaluation was discussed with you and your staff at a meeting held on March 3, 1988 (see Enclosure 2 for attendees). Your letter dated April 5, 1988, which provides your actions and comments regarding the SALP Report, is attached as Enclosure 3. These will be placed in the Public Document Room.

We have reviewed the improvements you have described in your letter and believe your actions are responsive and will provide future performance improvements. We also note your comments relative to certain functional areas and acknowledge that several changes to the SALP Report are appropriate. These changes, dealing with reactor water level design single failure susceptibility equipment qualification evaluations, the chlorine detection system, and several other matters are indicated in the amended report (Enclosure 4).

In summary, we felt the report, our meeting, and your response letter resulted in a constructive assessment of the performance at Three Mile Island Unit 1.

Your cooperation in the SALP program is appreciated.

Sincerely,

Original Signed By  
WILLIAM T. RUSSELL  
William T. Russell  
Regional Administrator

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MAY 09 1988

## Enclosures:

1. NRC Region I Letter, W. T. Russell to H. D. Hukill dated February 11, 1988
2. SALP Meeting Attendees
3. GPUN Letter, P. R. Clark to NRC dated April 5, 1988
4. Systematic Assessment of Licensee Performance (SALP) Amended Report No. 50-289/86-98
5. Errata Sheets

## cc w/encls:

T. G. Broughton, Operations and Maintenance Director, TMI-1  
 C. W. Smyth, Manager, TMI-1 Licensing  
 R. J. McGoey, Manager, PWR Licensing  
 E. L. Blake, Jr., Esquire  
 TMI-Alert (TMIA)  
 Susquehanna Valley Alliance (SVA)  
 Chairman Zech  
 Commissioner Roberts  
 Commissioner Bernthal  
 Commissioner Carr  
 Commissioner Pogers  
 K. Abraham, PAO, RI (13 copies)  
 Public Document Room (PDR)  
 Local Public Document Room (LPDR)  
 Nuclear Safety Information Center (NSIC)  
 NRC Resident Inspector  
 Commonwealth of Pennsylvania

## bcc w/encl:

Region I Docket Room (with concurrences)  
 J. Goldberg, OELD: HQ  
 J. Taylor, DERO  
 J. Lieberman, OE  
 W. Russell, RI  
 F. Congel, DRSS  
 SALP Management Meeting Attendees  
 R. Brady, RI  
 W. Oliveira, DRS  
 D. Holody, ES  
 Management Assistant, DRMA (w/o encl)  
 DRP Section Chief  
 R. Hernan, PM, NRR

RI:DRP

*meo*  
 Cowgill/meo  
 4/18/88

RI:DRP

*Bettenhausen*  
 Bettenhausen  
 5/5/88

RI:DRP

*Watts*  
 Watts  
 5/1/88

RI:DRP

*Allan*  
 Allan  
 5/6

RI:RA

*Russell*  
 Russell  
 5/6/88

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 04/18/88



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I

ENCLOSURE 1

475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket No. 50-289

SEP 11 1988

GPU Nuclear Corporation  
ATTN: Mr. H. D. Hukill  
Director, TMI-1  
P. O. Box 480  
Middletown, PA 17057

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP) Report No.  
50-289/86-98

The NRC Region I SALP Board conducted a review on December 8, 1987, and evaluated the performance of activities associated with the Three Mile Island (Unit 1) Nuclear Generating Station. The results of this assessment are documented in the enclosed SALP report, which covers the period November 1, 1986, to October 31, 1987. We will contact you shortly to schedule a meeting to discuss the report.

At the meeting, you should be prepared to discuss our assessment and any plans you may have to improve performance further. Any comments you may have regarding our report may be discussed at the meeting. Additionally, you may provide written comments within twenty days after the meeting.

Your cooperation is appreciated.

Sincerely,

A handwritten signature in cursive script that reads "W. T. Russell".

William T. Russell  
Regional Administrator

Enclosure: NRC Region I SALP Report 50-298/86-98

880220316 3PP

cc w/encl:

T. G. Broughton, Operations and Maintenance Director, TMI-1

C. W. Smyth, Manager, TMI-1 Licensing

R. J. McGoey, Manager, PWR Licensing

Ernest L. Blake, Jr., Esquire

Chairman Tech

Commissioner Roberts

Commissioner Bernthal

Commissioner Carr

Commissioner Rogers

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NRC Resident Inspector

Commonwealth of Pennsylvania

TMI Alert

Susquehanna Valley Alliance

ENCLOSURE 2

LIST OF ATTENDEES

SALP MANAGEMENT MEETING - MARCH 3, 1988

GPU Nuclear Corporation (GPUN)

P. F. Ahern, Senior Staff Specialist, NSCC-TMI  
G. R. Bond, Director, Systems Engineer  
T. G. Broughton, Operations and Maintenance Director, TMI-1  
R. P. Clark, President, GPUN  
D. K. Croneberger, Director, Engineering Projects  
I. R. Finfrock, Chairman, GORBs  
J. C. Fornicola, Manager, TMI QA Mods/Ops  
R. P. Germann, NSAD Director  
D. V. Hassler, TMI-1 Licensing Engineer  
H. D. Hukill, Vice President and Director, TMI-1  
R. L. Long, Vice President and Director, Division of Planning and Nuclear Safety  
R. S. Markowski, Manager, QA Program Development and Audit  
R. J. McGoey, Manager, TMI Licensing  
G. S. Metsky, Assistant Comptroller  
B. T. Moroney, Senior Staff Specialist, NSCC-OC  
W. Popow, MCF Production and Technical Director  
L. G. Robinson, Media Relations/Communications  
M. B. Roche, Vice President and Director, Division of Quality and Radiological Controls  
C. W. Smyth, TMI Licensing Manager  
J. R. Thorpe, Director, Licensing and Regulatory Affairs  
G. E. VonNieda, Chemistry/Materials Director  
E. G. Wallace, Engineering Services Director  
R. F. Wilson, Vice President and Director, Technical Functions

U.S. Nuclear Regulatory Commission (NRC)

L. H. Bettenhausen, Chief, Projects Branch No. 1, Division of Reactor Projects (DRP)  
R. J. Conte, Senior Resident Inspector, TMI  
C. J. Cowgill, Chief, Reactor Projects Section 1A, DRP  
A. W. Dromerick, Project Manager, Oyster Creek, NRR  
R. Hennon, Project Manager, TMI-1, NRR  
W. V. Johnston, Director, Division of Reactor Safety (DRS)  
W. F. Kane, Director, DRP  
W. T. Russell, Regional Administrator  
J. F. Wechselberger, Senior Resident Inspector, Oyster Creek

 **Nuclear**

GPU Nuclear Corporation  
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Writer's Direct Dial Number

C311-88-2034

April 5, 1988

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

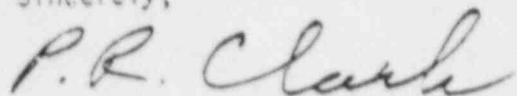
Gentlemen:

Three Mile Island Nuclear Station, Unit 1  
Operating License No. DPR-50  
Docket No. 50-289  
Response to SALP Report 86-98

On February 11, 1988, the NRC issued the Systematic Assessment of Licensee Performance (SALP) report for Three Mile Island Unit 1. A meeting to discuss this report was held in the GPUN corporate offices on March 3, 1988. The attachment to this letter provides the GPUN written comments on the SALP report. As indicated in the March 3, 1988 meeting, we are addressing the areas identified in the SALP as needing improvement.

We appreciate the opportunity to review with you the SALP report and provide our comments. We continue to believe that this dialogue is the most meaningful portion of the SALP process.

Sincerely,



P. R. Clark  
President

HDH/DVH/feg:

cc: W. Russell  
R. Hernan  
R. Conte

Attachment

8604120356-7pp

## ATTACHMENT 1

### RESPONSE TO SALP REPORT 86-98

#### A. Plant Operations

In general, we are pleased that the NRC noticed and acknowledged improvements made in Operations. We consider we had a good, safe operational period and that the record supports this. Our goal is to continue to improve and strive for excellence. Specifically we offer the following comments:

##### 1. Personnel Errors - Procedural Compliance

We recognize that closer attention to procedural compliance is required. Guidance in this area will be reinforced to all levels of supervision. In addition action will be taken to strengthen the procedure preparation and review process especially in the maintenance area.

##### 2. Schedular Pressure - Haste - Pace of Activities

Much attention has been directed, particularly since April 1987, to the need for proper planning and a safe conservative approach to all evolutions. We consider that we have been successful in getting this message to our people, as demonstrated during the letdown cooler replacement and the recent 3 day stator cleaning outages. These outages were controlled and conducted in a safe, well planned, and coordinated manner. We intend to continue to apply the principles used in these short outages and the lessons learned from them.

##### 3. Self Evaluation of Less Significant Problems

We acknowledge that more attention to and evaluation of day-to-day unusual events in the plant are needed. We use the formal Plant Incident Report (PIR) for a thorough evaluation of the more significant events. This is the proper use of the PIR system. However, we understand and agree events of lesser significance need more visibility at all levels of management so that lessons learned can be communicated and that unfavorable trends can be identified and appropriate action taken. We are currently working to determine the best way to implement such a program with minimal administrative impact. We expect to have a program in place by July 1, 1988.

B. Radiological Controls

We are in general agreement with the analysis as presented. The facts as we know them regarding the letdown filter cubicle (page 17, first full paragraph, and page 18, last sentence) do not indicate management inattentiveness. This is a complex job and we have properly performed seventeen filter changes subsequent to the incident demonstrating that sufficient attention has been provided to resolve the problems.

C. Maintenance

We are pleased that the NRC views the Maintenance Department as a positive influence on overall plant performance. The recently established Materiel Department, we believe, will provide us with even better long term plant reliability which will enhance safety. We offer the following specific comments:

1. Final Closeout of Job Tickets

We acknowledge that in some cases there has been excessive delay in closing out job tickets. Steps have already been taken to correct this area.

2. Vendor Communications/Interface Problems with the Major Emergency Diesel Generator Maintenance

We consider this to be an isolated incident that was probably exacerbated by schedular pressures. We clearly understand our responsibilities for control of contractor work and verification of accuracy of information supplied by contractors. This will be emphasized to all on site managers prior to the 7R outage.

D. Surveillance Testing

No comment.

E. Fire Protection

The Fire Protection area is one which has had a great deal of attention over the past years. There was a large amount of work done in support of Appendix R requirements. While we acknowledge specific deficiencies, we do not agree with the suggestion that there is a similarity in problems with the Environmental Qualification (EQ) area. The problems noted in the SALP were more isolated and in our view should not be compared with the EQ area.



F. Emergency Preparedness

We have taken action to correct the items cited. We have a Tech. Support Center (TSC) calculation handbook being developed and selected members of the TSC staff will visit other utilities' facilities to observe good practices that could benefit our TSC. We now have two primary methods to activate the Parsippany Technical Functions Center as well as a backup method which should eliminate any delay in having that center activated, although it should be noted that the activation times in the plan have always been achieved.

G. Security and Safeguards

No comment.

H. Outages

We believe our outages during the last year; 6R, Letdown Cooler and Stator Cooling, were well planned and conducted properly. The 7R outage has better planning and preparations are more extensive which should result in an even better outage.

Our test program is an integral part of our modification process. At times this test program will uncover problem areas. However, we will continue to emphasize to our people the importance of proper reviews of modifications to find and resolve potential problems prior to installation and testing.

Outage work packages have previously remained open too long. Emphasis is being placed on close out of Maintenance job tickets and a new modification package process has been developed to assure a more timely close out of modification packages consistent with the completion of the outage.

I. Licensing Activities

We have three detailed comments to the SALP in this area:

1. Although the methods to meet Appendix R requirements are still being reviewed, GPUN considers that we have satisfied the Appendix R requirements.
2. The time NRC had to approve the pressure-temperature amendment appears inaccurate. GPUN submitted the request July 24, 1987 and the amendment was issued November 18, 1987. This is 17 weeks as compared to the stated 10-11 weeks (2-1/2 months). Perhaps there is a problem with the receipt of mail. GPUN will follow-up on critical license submittals to assure they have been received.

3. On the Chlorine Technical Specifications, GPUN has never committed to meeting Reg. Guide 1.95 requirements. Therefore, our submittal would not have provided the justification looked for by the NRC.

J. Engineering Support

Consistent with the previous SALP, we have been performing a self assessment of the engineering support area. Phase I consisted of a structured survey of the engineering staff and the "user community." The summary of results is completed and the final phase, including conclusions and action plan is to be complete by May. We look forward to reviewing the results of this assessment with your staff.

We are addressing the NRC comments in five areas (1) Engineering Staff Accountability; (2) Vendor Control (both suppliers of engineered equipment and Architect/Engineers); (3) Schedule Insensitivity related to backlog, NRC issues, and modification engineering; (4) Communications between design organizations with other functional groups, and (5) Technical Reviews.

We have been working to improve these areas by the following actions: (actions already implemented)

Modifications

Implemented program changes to:

- Stop splitting design responsibility between Architect Engineers/Contractors on individual modifications.
- Move to use only one A/E per plant for design work not performed by GPUN.
- Enhanced design reviews with stronger and earlier operations/maintenance input.
- Enforce Plant walkdowns by design organization.

Establish schedules to ensure earlier release (target of 6 months) prior to an outage.

Continually implement corrective actions based upon analysis of quality trends.

Backlog

Focus resources to further reduce engineering action items.

### Configuration Control

- Design Document Data Base (CARIRS) improved to further address user issues.
- Vendor Manuals - Essential manuals have been reviewed and controlled.
- Completed Equipment Level Quality Classification List and Engineering Data Base. Approximately 25,000 components have been entered into the Engineering Data Base.

### Owners Group

Increase focus on Owners Group and taking leadership role in them.

Management will continue to emphasize the need for thorough and timely responses to technical issues by including:

1. Prompt implementation of action plans developed as a result of the self assessment.
2. Emphasizing the need for Operations and Maintenance input on plant modifications by adherence to procedural requirement for design reviews.
3. Strengthen technical and safety reviewer training.
4. Continue the focus on timely reduction of backlog.
5. Extend the sound technical support provided by the Startup and Test organization to shop testing of engineered vendor hardware.

We do have some specific comments regarding specific issues identified in the SALP report.

The last paragraph on page 40 states in parts:

"These deficiencies led to licensee having to perform additional testing of quality materials as a result of an NRC evaluation performed during the period."

GPUN is unaware of the instance(s) cited. There were no instances where GPUN performed additional testing. There was one instance where GPUN had to perform further evaluation of a part in a component. We assume this is the instance being cited in the TMI-1 SALP.

The first paragraph on page 40 of the SALP makes reference to the reactor water level design having problems.

TMI-1 was required to complete NURFG 0737 item II.F.2 prior to restart from Outage 6R. During an October 2, 1986 meeting, the NRC identified disagreement with the GPUN approach in that RCITS water level input signals to the plant computer enter a single multiplexer and are displayed through two computers. The NRC disagreed with this configuration on the basis that it did not satisfy the single failure criterion. GPUN maintained that this configuration meets the requirements of NUREG 0737 item II.F.2 and that RCITS does not constitute accident monitoring instrumentation, and therefore, the single failure criterion does not apply. GPUN continues to believe the design as described is adequate. To date the NRC has not documented a finding that the RCITS design as installed is unacceptable.

In addition, GPUN does not believe that a correlation exists between the design of the reactor coolant inventory trending system and perceived difficulties with the safety review process.

K. Training and Qualification Effectiveness

In response to the NRC recommendation for the licensed operator requalification examinations, a requirement has been established, as documented in the licensed operator requalification training program description, that examinations should emphasize the operational application of theoretical concepts and the application of facility administrative limits, Technical Specifications, etc., rather than memorized lists of numbers and facts. Further, steps are being taken to upgrade learning objectives and test items.

L. Assurance of Quality

We are in general agreement with the analysis portrayed although we believe the management attitude problem portrayed is an isolated one and one in which the company is actively working to resolve. We do not believe this problem is manifested in the upper levels of site management.

The safety review program is an area where dialogue has been continuing with the NRC. At this time we do not offer any comments other than this area has had and will continue to have a great amount of management attention.