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1800 M STREET, N.W.  
WASHINGTON, D. C. 20036

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TELECOPIER

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CABLE "SHAWLAW"

VIRGINIA OFFICE

1501 FARM CREDIT DRIVE

MCLEAN, VIRGINIA 22102

JOHN F. DEALY\*

B. SCOTT CUSTER, JR.

RICHARD S. BEATTY

COUNSEL

JOHN M. BRYSON, II\*  
 GEORGE F. ALBRIGHT, JR.\*\*  
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 DOROTHEA W. DICKERMAN

\* NOT ADMITTED IN D.C.  
\* ADMITTED IN VIRGINIA

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 SCOTT A. ANENBERG  
 CAMPBELL KILLEFER  
 PAUL M. THOMAS

WRITER'S DIRECT DIAL NUMBER

November 28, 1984 (202) 822-1215

Administrative Judge  
 Gary J. Edles, Chairman  
 Atomic Safety and License Appeal  
 Board  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C. 20555

Administrative Judge  
 John H. Buck  
 Atomic Safety and Licensing Appeal  
 Board  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C. 20555

Administrative Judge  
 Christine N. Kohl  
 Atomic Safety and Licensing Appeal  
 Board  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C. 20555

In the Matter of  
 Metropolitan Edison Company  
 (Three Mile Island Nuclear Station, Unit No. 1)  
 Docket No. 50-289 *SP*

Dear Chairman Edles and Administrative Judges Buck and Kohl:

In accordance with our practice of notifying the Appeal Board, the Licensing Board, and the parties of changed circumstances or new information on issues of interest, Licensee hereby provides a copy of a recently issued report prepared by Andrew J. Miller Associates for GPU Nuclear. The purpose of the report was to identify ways in which the Technical

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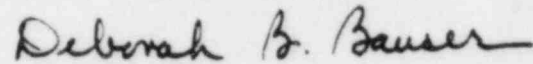
SHAW, PITTMAN, POTTS & TROWBRIDGE

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Administrative Judge Gary J. Edles  
Administrative Judge John H. Euck  
Administrative Judge Christine N. Kohl  
November 28, 1984  
Page 2

Functions Division of GPU Nuclear could enhance its contribution and effectiveness in carrying out its mission.

Respectfully submitted,



Deborah B. Bauser  
Counsel for Licensee

DBB:jah  
Enclosure  
cc: Service List

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of )  
METROPOLITAN EDISON COMPANY )  
(Three Mile Island Nuclear )  
Station, Unit No. 1) )

Docket No. 50-289

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U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Thomas M. Roberts, Commissioner  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

James K. Asselstine, Commissioner  
U.S. Nuclear Regulatory Commission  
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U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Lando W. Zech Jr., Commissioner  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
Gary J. Edles, Chairman  
Atomic Safety & Licensing Appeal  
Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
John H. Buck  
Atomic Safety & Licensing Appeal  
Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
Christine N. Kohl  
Atomic Safety & Licensing Appeal  
Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
Ivan W. Smith, Chairman  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
Sheldon J. Wolfe  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Administrative Judge  
Gustave A. Linenberger, Jr.  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Docketing and Service Section (3)  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Atomic Safety & Licensing Board  
Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Atomic Safety & Licensing Appeal  
Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Jack R. Goldberg, Esq. (4)  
Office of the Executive Legal  
Director  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Thomas Y. Au, Esq.  
Office of Chief Counsel  
Department of Environmental  
Resources  
505 Executive House  
P.O. Box 2357  
Harrisburg, PA 17120

Mr. Henry D. Hukill  
Vice President  
GPU Nuclear Corporation  
P.O. Box 480  
Middletown, PA 17057

Mr. and Mrs. Norman Aamodt  
R.D. 5  
Coatesville, PA 19320

Ms. Louise Bradford  
TMI ALERT  
1011 Green Street  
Harrisburg, PA 17102

Joanne Doroshow, Esquire  
The Christic Institute  
1324 North Capitol Street  
Washington, D.C. 20002

Lynne Bernabei, Esq.  
Government Accountability  
Project  
1555 Connecticut Avenue  
Washington, D.C. 20036

Ellyn R. Weiss, Esq.  
Harmon, Weiss & Jordan  
2001 S Street, N.W., Suite 430  
Washington, D.C. 20009

Michael F. McBride, Esq.  
LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N.W.  
Suite 1100  
Washington, D.C. 20036

Michael W. Maupin, Esq.  
Hunton & Williams  
707 East Main Street  
P.O. Box 1535  
Richmond, VA 23212

William T. Russell  
Deputy Director, Division  
of Human Factors Safety  
Office of NRR  
Mail Stop AR5200  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

NOV 13 1984



Management Succession Planning  
Organizational Development  
Management Training

**Andrew J. Miller Associates**

November 9, 1984

R.F. Wilson, Vice President/Technical Functions  
G.P.U. Nuclear Corporation  
100 Interpace Parkway  
Parsippany, NJ 07054

Dear Mr. Wilson:

During June of this year, we began an effort directed toward identifying ways in which the Technical Functions Division could enhance its contribution and effectiveness in carrying out its mission. Phase one, which focused on you and your directors, was completed during July. Phase two, which was recently completed, focused on interviewing a cross section of Technical Functions managers, supervisors and engineers with a view toward developing avenues for achieving the goal cited above.

The attached report covers the results of the interviews conducted during phase two, compares the results of phases one and two, and outlines suggested courses of action for enhancing the contribution and effectiveness of the Technical Functions Division.

This report is presented in several sections, as follows:

Section I	Executive Summary
Section II	Scope and Method of Data Collection/Analysis
Section III	Findings in Common
Section IV	Unique Findings
Section V	Comparison of Results between Phases One and Two
Section VI	Summary Conclusions/Recommendations
Appendix 1	Exhibits

People interviewed were forthcoming with their responses to the interview questions and approached the interviews from a positive frame of reference.

The project was important to those interviewed. There was a consensus among those interviewed that this was a positive step which could indeed lead to improved individual and group contribution.

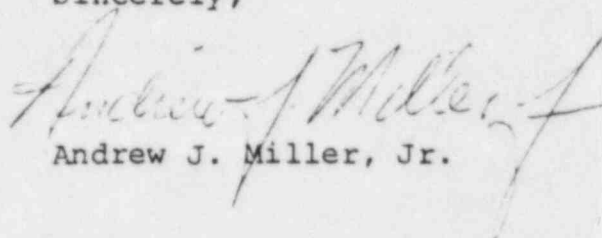
Mr. R. F. Wilson

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November 9, 1984

I was challenged by this important assignment and appreciate being invited to participate in this collaborative project with you.

Sincerely,

A handwritten signature in cursive script that reads "Andrew J. Miller, Jr." The signature is written in dark ink and is positioned above the typed name.

Andrew J. Miller, Jr.

Enclosure

cc: Richard P. Coe, Ph.D.

G.P.U. NUCLEAR TECHNICAL FUNCTIONS DIVISION

A Report

on

Identifying Ways In Which The Division Can Enhance  
Its Contribution And Effectiveness

Submitted by:

Andrew J. Miller Associates  
November 9, 1984

SECTION I

Executive Summary

Findings in Common

Unique Findings

Comparison of Phases  
One and Two Results

Recommendations



## SECTION I Executive Summary

This section provides overview comments in four areas:

- A. Findings in Common
- B. Unique Findings
- C. Comparison of Phases One and Two Results
- D. Recommendations

Those interviewed included managers, supervisors, and engineers from Parsippany, TMI, Oyster Creek, and Reading.

### A. Findings in Common

The comments which follow apply to areas mentioned by 20% or more of the total sample and by, at least, 10% or more of the samples at three of the four locations.

- Job clarity is not an issue from the respondents perspective.
- The top three measures of success are client satisfaction, meeting schedules, and quality of work.
- There is a lack of clarity about what gets rewarded/discouraged.
- Collaboration/coordination needs to be improved within Tech. Functions.
- Plant interactions are not what they should be.
- Procedures are voluminous and difficult to interpret and implement.
- Unrealistic schedules are set.
- More time needs to be spent on planning.
- The workload is too heavy.
- Management gets too involved in details and engineering.

### B. Unique Findings

The comments which follow apply to areas cited by 20% or more of the sample(s) at one or two locations only.

- Parsippany engineers need more freedom to do their jobs.
- Management feedback tends to focus on negatives within three departments.
- Parsippany departments felt a need for more direction on goals/priorities and "big picture" meetings.
- Startup and Test felt engineering quality at Oyster Creek should be improved.
- Interfaces needing improvement are EP&I/Eng.Proj.; Plant Eng.(O.C.)/Eng.&Des.; Chemistry(O.C.)/Reading; O.C.&TMI/Eng.Proj.

## SECTION I

### C. Comparison of Phases One and Two Results

The comparison of results between Phase One (Vice President and Directors) and Phase Two (Managers, Supervisors, and Engineers) indicated a fair amount of agreement between the two groups.

### D. Recommendations

Ten recommendations will speak to the following areas:

1. Clarifying what is to be rewarded within the organization.
2. Feeding back the results of Phase Two to all employees.
3. Improving planning within and between sections, departments, locations, and the division.
4. Fostering a collaborative approach to problem solving and opportunity identification.
5. Providing assistance to managers and supervisors on how to conduct effective planning meetings.
6. Strengthening managerial skills in the areas of interpersonal relationships and group dynamics.
7. Delineating goals and priorities.
8. Developing improved plant interactions.
9. Resolving intradivisional and plant interface issues.

SECTION II

Scope and Method  
of  
Data Collection/Analysis

SECTION II Scope and Method of Data Collection/Analysis

The data for this report was gathered through interviews conducted with 55 Technical Functions managers, supervisors and engineers. The distribution of those interviewed is shown in Tables 1 and 2 below:

Table 1

<u>Department</u>	<u>Management Level</u>	
	<u>Manager/Supervisor</u>	<u>Engineer</u>
Engineering Services	7	2
Licensing and Regulatory Affairs	2	4
Engineering and Design	8	8
Systems Engineering	6	7
Engineering Projects	3	4
Startup and Test	2	2
	<u>28</u>	<u>27</u>

Table 2

<u>Location</u>	<u>Department</u>	<u>Management Level</u>	
		<u>Manager/Supervisor</u>	<u>Engineer</u>
Parsippany	Eng. Services	6	2
	Licensing & Reg.	1	2
	Eng. & Design	6	5
	Systems Eng.	2	4
	Eng. Projects	3	4
		<u>18</u>	<u>17</u>
Oyster Creek	Eng. Services	1	-
	Licensing & Reg.	-	1
	Systems Eng.	2	2
	Startup & Test	1	1
		<u>4</u>	<u>4</u>
T.M.I.	Licensing & Reg.	1	1
	Eng. & Design	-	1
	Systems Eng.	2	1
	Startup & Test	1	1
		<u>4</u>	<u>4</u>
Reading	Eng. & Design	2	2

## SECTION II

Each interviewee was asked nine questions (See Appendix 1). The answers to these questions provided the data base for a four-step analysis.

Step 1. - The responses from all questions were analyzed to identify "Findings in Common" which are covered in Section III.

"Findings in Common" is defined as those areas cited by 20% or more of the total sample and by, at least, 10% of the samples at three of the four locations.

Step 2. - The responses from all questions were analyzed also to identify "Unique Findings" which are covered in Section IV.

"Unique Findings" is defined as those areas cited by 20% or more of the samples at one or two locations only.

Step 3. - The results of the interviews conducted during Phase One (V.P. and Directors) were compared with the results of the interviews conducted during Phase Two (Managers and Engineers) to determine where similarities and differences existed.

Step 4. - Conclusions were drawn from the foregoing analyses, and a series of recommendations were developed for identifying ways in which the Technical Functions Division can enhance its contribution and effectiveness in carrying out its mission.

SECTION III

Findings in Common

SECTION III Findings in Common

"Findings in Common" is defined as those areas cited by 20% or more of the total sample and by, at least, 10% or more of the samples at three of the four locations.

Ten areas fell into this category; these are listed below. Across from each area listed are the percentages of interviewees commenting on the area.

Also, contained in this section are reviews of each of the areas listed below. These reviews focus on highlighting the central theme(s) of each area and other pertinent observations.

Summary conclusions and recommendations are not covered in this section, but are presented in Section VI.

	<u>Areas</u>	Percent of Sample Commenting				
		<u>Total</u>	<u>Pars.</u>	<u>TMI</u>	<u>O.C.</u>	<u>Reading</u>
1.	Job Clarity	100	100	100	100	100
2.	Measures of Success	100	100	100	100	100
3.	What tends to get Rewarded/Discouraged	100	100	100	100	100
4.	Technical Functions - Collaboration/Coordination	45	43	62	50	25
5.	Plant Interaction	40	46	25	38	25
6.	Procedures	31	37	25	12	25
7.	Schedules	25	26	25	25	25
8.	Planning	24	26	25	12	25
9.	Workload	24	26	12	25	25
10.	Management Interface (Mgt. gets too involved in details and doing engineer- ing work)	22	28	—	12	25

1. Job Clarity

Information regarding this area was gathered from the responses to question 1; "What do you understand your job to be?"

Ninety-one percent of the interviewees were able to explain in clear terms what their jobs were; both in terms of accountabilities and contribution. Job clarity is clearly not an issue from the interviewee perspective.

2. Measures of Success

Information regarding this area was gathered from the responses to question 3; "What are your measures of success?"

### SECTION III

The measures of success, along with the percentages of respondents citing them, are listed below.

<u>Measures of Success</u>	<u>Percent of Sample Commenting</u>				
	<u>Total</u>	<u>Pars.</u>	<u>TMI</u>	<u>O.C.</u>	<u>Reading</u>
. Clients, primarily the plants, are satisfied with our work	51	54	12	50	100
. Schedules are met	49	57	50	38	—
. Quality of work	29	28	38	25	50
. Technical Functions Mgt. is satisfied	18	20	—	25	25
*. Morale & motivation of my people	16	11	25	12	50
. Meeting costs	15	23	—	—	—
*. Backlog of work	11	11	—	—	—

\*All responses by Managers/Supervisors

Meeting costs was primarily a measure of success for the Engineering Projects Department. They accounted for 63% of the total responses for this measure of success.

### 3. What tends to get Rewarded/Discouraged

Information regarding this area was gathered from question 8; "What tends to get rewarded/discouraged within your organization?"

Interviewees were more unclear than clear about this area. Forty-four percent of the total sample indicated that they were not clear about what is discouraged within their organization. There was a better awareness of what was rewarded; however, a significant number of people were unclear about this. A breakout of comments on this area is listed below.

<u>Comments</u>	<u>Percent of Sample Commenting</u>				
	<u>Total</u>	<u>Pars.</u>	<u>TMI</u>	<u>O.C.</u>	<u>Reading</u>
. Not clear about what is discouraged	44	43	25	88	—
. Doing a good job, i.e., the boss & clients like it; is rewarded	34	26	25	38	50
. Not clear about what is rewarded	34	37	25	50	—



## SECTION III

No other comment was cited by 10% or more of all those interviewed. Supervisors and engineers made each of the above comments in approximately equal percentages.

### 4. Technical Functions Collaboration/Coordination

Information regarding this area was gathered from questions 4, 5, 6, and 9 (See Appendix 1).

Forty-five percent of the total sample commented on this area. While no one or two comments stood out, the following comments tend to capture the themes of what was being said.

- "It's difficult to get support from other departments and sections because of differing priorities."
- "People aren't clear about how to get help within the division."
- "I need to meet and interface with those I work with at Parsippany."
- "Departments tend to solve their own problems without examining the impact on other departments."
- "Planning and scheduling is done within departments without much mutual planning."
- "There is duplication of effort within my department."
- "Often, we have two groups working on the same problem and they don't know it."
- "I'm not kept abreast of work impacting on me."
- "There seems to be a general feeling that when my job is done, I'm done; rather than, thinking about the general users."
- "Personal contact between departments is lacking— a lot of work is done by paper with no human contact."
- "We need to start some effort to get people together, so the parts can start to understand what each does and how we can help each other."

The percentage of each subsample commenting on this area was:

Pars. 43% — TMI 62% — O.C. 50% — Reading 25% —  
Mgr./Supv. 46% — Eng. 44% — Eng.Svc. 33% —  
Lic. 50% — Eng.&Des. 38% — Sys.Eng. 62% —  
Eng.Proj. 43% — S/T 50%.

This clearly is an area affording opportunity for improvement.

## SECTION III

### 5. Plant Interaction

Information regarding this area was gathered from questions 2, 4, 5, 6, and 9. (See Appendix 1)

Forty percent of the total sample commented on this area. The comment listed below was made by 64% of those who cited this area.

- Parsippany engineers and managers need to interact more, other than through paper, with the plants; and they need to spend more time at the plants.

The percentage of each subsample making this comment was:

Pars. 26% — TMI 25% — O.C. 25% — Reading 25% —  
Mgr./Supv. 32% — Eng. 18% — Eng.Svc. 11% —  
Lic. 17% — Eng.&Des. 38% — Sys.Eng. 31% —  
Eng.Proj. 28% — S/T 0%

This comment focuses on "what should be done" and applies to the plants in general.

Two reasons were given as to why engineers and managers are not visiting the plants more—workload and distance.

Managers and supervisors seem to feel stronger about increased plant interactions and visitations than do engineers by an approximate ratio of 2:1.

### 6. Procedures

Information regarding this area was gathered from questions 2, 4, 5, 6, and 9. (See Appendix 1)

Thirty-one percent of the total sample commented on this area. The comment listed below was made by 82% of those who cited this area.

- Technical Functions procedures are voluminous and difficult to interpret and implement.

The percentage of each subsample making this comment was:

Pars. 26% — TMI 25% — O.C. 25% — Reading 25% —  
Mgr./Supv. 21% — Eng. 30% — Eng.Svc. 33% —  
Lic. 17% — Eng.&Des. 31% — Sys.Eng. 15% —  
Eng.Proj. 28% — S/T 25%.

## SECTION III

While it was generally felt that procedures were necessary, many of the interviewees indicated they were spending, what they considered to be, an undue amount of time on paper work versus doing the job. They also pointed out that the sheer volume of procedures tended to slow down the completion of work.

### 7. Schedules

Information regarding this area was gathered from questions 2, 4, 5, 6, and 9. (See Appendix 1)

Twenty-five percent of the total sample commented on this area. The comment listed below was made by 64% of those who cited this area.

- We set unrealistic schedules.

The percentage of each subsample making this comment was:

Pars. 14% — TMI 25% — O.C. 12% — Reading 25% —  
Mgr./Supv. 21% — Eng. 11% — Eng.Svc. 22% —  
Lic. 17% — Eng.&Des. 19% — Sys.Eng. 8% —  
Eng.Proj. 14% — S/T 25%.

Many people felt that setting unrealistic schedules led to frequent schedule slippages; and that these slippages tended to make schedules less meaningful and less useful than they could or should be.

### 8. Planning

Information regarding this area was gathered from questions 2, 4, 5, 6, and 9. (See Appendix 1)

Twenty-four percent of the total sample commented on this area. The comment listed below was made by 100% of those who cited this area.

- We need to spend more time planning.

The percentage of each subsample making this comment was:

Pars. 26% — TMI 25% — O.C. 12% — Reading 25% —  
Mgr./Supv. 32% — Eng. 15% — Eng.Svc. 11% —  
Lic. 35% — Eng.&Des. 25% — Sys.Eng. 0% —  
Eng.Proj. 71% — S/T 25%.

## SECTION III

Respondents felt planning should focus on setting better and more realistic schedules; problem clarification; exploring alternative ways of doing the job; problem anticipation; and reviewing the current status of work with a view toward identifying and removing road blocks. Heavy workload was mentioned as the key inhibitor to sufficient planning.

As might be expected, managers/supervisors expressed more of a need for increased planning time than did the engineers.

It appears that a potentially serious dilemma exists for Engineering Projects, given that 71% of those interviewed expressed a need for increased planning time; and, also, given that this is a key requirement if they are to do their jobs effectively.

### 9. Workload

Information regarding this area was gathered from questions 2, 4, 5, 6, and 9. (See Appendix 1)

Twenty-four percent of the total sample commented on this area. The comment listed below was made by 100% of those who cited this area.

- The workload is too heavy.

The percentage of each subsample making this comment was:

Pars. 26% — TMI 12% — O.C. 25% — Reading 25% —  
Mgr./Supv. 32% — Eng. 15% — Eng.Svc. 11% —  
Lic. 17% — Eng.&Des. 31% — Sys.Eng. 38% —  
Eng.Proj. 14% — S/T 0%

The respondents felt that with so many tasks to do, it was difficult to give each task proper attention. As mentioned previously, this heavy workload is perceived as taking away from important planning time and was a factor in keeping people from visiting the plants as much as they should.

### 10. Management Interface

(Management gets too involved in details and doing engineering work)

Information regarding this area was gathered from questions 2, 4, 5, 6, 7, and 9. (See Appendix 1)

### SECTION III

Twenty-two percent of the total sample made the comment shown in the parenthesis above.

The percentage of each subsample making this comment was:

Pars. 29% — TMI 0% — O.C. 12% — Reading 25% —  
Mgr./Supv. 11% — Eng. 33% — Eng.Svc. 22% —  
Lic. 33% — Eng.&Des. 37% — Sys.Eng. 7% —  
Eng.Proj. 14% — S/T 0%.

Engineers indicated that when management gets too involved in details, it makes them feel more like clerks than engineers. They feel this behavior, on the part of their managers and supervisors, signals also that management doesn't trust them to do the job.

The response of managers/supervisors could signal that management involvement in details and engineering may be an issue with management levels higher than those interviewed.

SECTION IV

Unique Findings

## SECTION IV Unique Findings

"Unique Findings" is defined as those areas cited by 20% or more of the sample(s) at one or two locations only.

These findings tended to cluster into the five areas listed below. The percentage of interviewees commenting from each locations is shown for each listed area.

Also, contained in this section are reviews of each area. These reviews focus on highlighting the central theme(s) of each area and other pertinent observations.

Summary conclusions and recommendations are not covered in this section, but are covered in Section VI.

<u>Areas</u>	<u>Percent of Sample Commenting</u>			
	<u>Pars.</u>	<u>TMI</u>	<u>O.C.</u>	<u>Reading</u>
1. Management Interfaces	<u>74</u>	12	12	<u>25</u>
2. Plant Engineering Interface @ O.C.	29	—	12	—
3. EP&I Interface @ Pars.	<u>23</u>	12	12	—
4. Engineering Quality @ O.C.	<u>1</u>	—	<u>25</u>	—
5. Chemist Interface @ O.C.	—	—	—	<u>75</u>
6. Interfaces @ O.C. & TMI	(While not meeting the "Unique Findings" guidelines, these interfaces were identified as needing attention by 20% or more of the Engineering Projects sample.)			

### 1. Management Interfaces

Information regarding this area was gathered from questions 4, 5, 6, 7, and 9. (See Appendix 1)

While all locations commented on this area, Parsippany accounted for 90% of the total respondents. Seventy-four percent of the Parsippany sample made comments on this area. Only Parsippany results are reported.

This area has five subsections. These are discussed below.

1a. Thirty-one percent of the Parsippany sample made this comment.

- I need more direction on goals and priorities.

Managers, supervisors and engineers commented in equal percentages. All departments commented and the percentages of department subsamples making this comment ranged from 14% to 67%.

SECTION IV

- 1b. Thirty-one percent of the Parsippany sample made this comment.

- We need more "big picture" meetings.

Employees at all levels felt a need to see more of top management, i.e., the Vice President and Directors; and to be kept better informed on matters such as: Where is GPUN headed; What is the role of Tech. Functions in the overall scheme of things; and What does this mean for the various departments.

Also, employees were anxious for more information relating to their departments. Information such as: What projects are we working on that require multi-disciplinary inputs and how are these going; What is the status of projects overall; What needs more attention and/or cooperation; What is the status of overall priorities, i.e., what's new or what's changing; and General information which would keep them abreast of activities within the division, department, and sections. As one individual put it, "We ought to have more - how to work smarter meetings."

The percentages of department samples making this response ranged from 17% to 43% with all departments commenting.

- 1c. Twenty-three percent of the Parsippany sample (all engineers) said:

- I would like to have more freedom from my boss to do my job.

Thirty percent of the Parsippany engineers responded. Comments were made by every department except Licensing and Regulatory Affairs. Percentages of response by engineers in these departments ranged from 25% to 75%.

Some comments which provide additional insight are:

- "I can't send memos or letters without a two-level approval."
- "My manager does not give me enough freedom to plan how to achieve a goal."
- "I need more freedom to respond to plant requests on short notice."
- "It doesn't matter what I say, we do it the way the boss wants anyway."



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- 1d. Twenty-three percent of the Parsippany sample said:
- Management feedback tends to focus on the negative.

Comments came from three departments: Engineering Services, Engineering and Design, and Engineering Projects. The percentages of people making this comment within each department ranged from 14% to 37%. Managers, supervisors, and engineers, as a whole, commented in about equal proportions.

- 1e. While only 18% of the total Parsippany sample commented on the following, it deserves mentioning because it is solely a managerial issue.

- I spend too much time doing engineering work.

This comment was made by 67% of the managers within Engineering and Design.

These managers felt they got involved in engineering more than they would like because of the workload. They also felt this took away from time that could and should be spent on managing.

## 2. Plant Engineering Interface at Oyster Creek

Information regarding this area was gathered from question 7, "What are your critical interfaces and how are these going?"

Twenty-nine percent of the Parsippany sample cited this as an interface needing improvement. Ninety percent of those commenting came from Engineering and Design. Eighty-two percent of the Engineering and Design sample cited this as an interface needing improvement.

While no theme came through, the following comments shed light on the problems with the interface.

- "Plant Engineering takes the view that Tech. Functions should do everything."
- "They are reluctant to work with us and don't come to us for help."
- "Everything we do is suspect."
- "There are a lot of confrontations on what should be done and how."

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### 3. EP&I Interface at Parsippany

Information regarding this area was gathered from question 7, "What are your critical interfaces and how are these going?"

Twenty-three percent of the Parsippany sample indicated this interface needed improvement. Seventy-five percent of the respondents came from Engineering Projects, and Engineering and Design. Forty-three percent of the Engineering Projects sample said this interface needed improvement and 27% of the Engineering and Design sample did likewise.

Engineering and Design said:

- It's hard to get help from EP&I.

Engineering Projects said:

- EP&I is slow to respond and often misses schedules.

### 4. Engineering Quality at Oyster Creek

Information regarding this area was gathered from questions 4, 5, 6, and 9. (See Appendix 1)

Twenty-five percent of the Oyster Creek sample, wholly accounted for by Startup and Test respondents, said:

- What's specified by engineering often doesn't conform to the current plant configuration.

They felt more walk downs were needed.

### 5. Chemistry Interface at Oyster Creek

Information regarding this area was gathered from question 7 (see #3 above).

Seventy-five percent of the Reading sample felt:

- Oyster Creek doesn't seem to accept our function and resents our help.

### 6. Interfaces @ O.C. & TMI

Forty-three percent of the Engineering Projects sample indicated the Oyster Creek interface needed attention and 28% of the sample felt the same about TMI. The problem in common was - the plants don't participate or offer comments early enough in the review cycle.

SECTION V

Comparison of Results  
between  
Phases One and Two

## SECTION V Comparison of Results between Phases One and Two

Each of the key findings from Phase One (V.P. and Directors) is listed below. Phase Two (Managers, Supervisors and Engineers) results are compared with each of these.

1. The measures of success mentioned most often by the Phase One sample were:

- Projects will be of high quality, completed on time, and within budget. (7 people commented)
- We will have an optimal backlog. (4 people commented)

There was agreement on the part of the Phase Two sample that meeting schedules and quality of work are important measures of success. They were listed 2nd and 3rd out of the seven measures cited. The number one measure of success for the Phase Two sample was: "Clients, primarily the plants, are satisfied with our work." I would think that quality and meeting schedules are implied as a part of this measure also.

Meeting costs was mentioned by only 15% of the Phase Two sample. However, 63% of the respondents from Engineering Projects cited this measure. This would appear to make sense; since, at the levels interviewed, Engineering Projects would most likely have overall budget responsibility.

Backlog of work was ranked 7th out of 7 for the Phase Two sample. While all respondents on this measure were managers and supervisors, still they accounted for only 22% of the total sample at this level. There appears to be no clear explanation for the difference in this measure between Phases One and Two.

2. The Phase One sample felt that more planning scheduling and decision making should be done at the first level of supervision. (5 people commented)

An explanation for this feeling may be found in the responses of the Phase Two managers and supervisors. Twenty-one percent of them felt unrealistic schedules were set; 32% felt they needed to spend more time on planning; and 32% felt the workload was too heavy and took away from planning time. Also, Parsippany managers and supervisors indicated they needed more direction on goals and priorities; and needed to be kept better informed on activities within the division, departments, and sections.

3. The Phase One sample felt managers and engineers were too reactive; they wait until asked more than they should. (5 people commented)

3. (continued)

The Phase Two sample also felt that Parsippany engineers and managers needed to interact more with the plants. Twenty-six percent of the total sample, 32% of the managers/supervisors, and 18% of the engineers felt this way.

4. The Phase One sample indicated there was a lack of follow-up on being sure projects are carried out at the first level of supervision and engineer levels. (3 people commented)

There was no way to make a direct comparison on this issue.

5. The Phase One sample felt there was too much "we/they" and projects fall through the cracks because of differences in priorities. (5 people commented)

The comments made by the Phase Two sample regarding the need for more collaboration/coordination within Technical Functions lends support to this observation. (See Section III—Findings in Common)

6. The Phase One sample felt interfaces with plants and M&C need to be improved. (6 people commented on plant interfaces)  
(3 people commented on M&C interfaces)

While M&C didn't appear to be a major issue with the Phase Two group, there was clear agreement on the part of the Phase Two sample that plant interfaces needed to be improved.

7. The Phase One sample felt there was inadequate planning and goal setting. (3 people commented)

The Phase Two sample was substantially in agreement. Twenty-four percent of the total sample indicated that more time needed to be spent on planning.

Critical division interfaces are not compared in this section, since the comparison becomes self-evident as one reviews other sections of this report.

In summary, there appears to be a fair amount of agreement between the populations of Phase One and Phase Two.

SECTION VI

Summary Conclusions/Recommendations

## SECTION VI Summary Conclusions/Recommendations

This section is in two parts:

- A. Summary Conclusions
- B. Recommendations

### A. Summary Conclusions

1. There is a lack of clarity about what gets rewarded/discouraged within Technical Functions. The reward issue is key here, since individuals tend to direct their energies toward attaining results which are rewarded by the organization. When the majority of individuals are clear about what is rewarded, the division and the departments will tend to pull in the same direction. Lack of clarity about rewards leads to inconsistency and a diffusion of efforts; there is evidence that more of this is happening than is desired by both the Phase One and Phase Two groups.
2. Collaboration and coordination needs to be improved. Personal contacts within departments are lacking, there is duplication of effort, getting support is difficult, there is not enough mutual planning and scheduling done, there is confusion about how to get help within the division, and there is a need for people to get together and explore how they can help each other.

Respondents appear willing to devote substantial effort toward improving collaboration and coordination within the division; but, not much will be accomplished by individuals alone. The thrust needs to be directed toward obtaining unified effort and collaboration within and amongst departments and locations so that the contribution of the division is greater than the sum of its parts.

3. Three issues surfaced which appear to be impeding the efficient and effective completion of work within and between Technical Functions departments.
  - Respondents feel there is insufficient time available for and devoted to planning. Thus, not enough effort is devoted to setting realistic schedules; problem clarification; exploring alternatives; integrating work across and within departments and locations; problem anticipation/prevention; and removing roadblocks to goal achievement.

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- Procedures, while deemed necessary, are seen as voluminous, time consuming and difficult to interpret and implement.
  - The workload is perceived as being too heavy to give all tasks the attention they require.
4. Management interfaces need to be examined; especially, at Parsippany. A significant number of Parsippany respondents (25% or more), represented across the departments, felt that managers and supervisors:
- Get too involved in details and doing engineering work.
  - Need to provide more direction on goals and priorities.
  - Need to provide more freedom for engineers to do their jobs.
  - Need to have more meetings which focus on results; priorities; problems, and providing information needed by people to keep abreast of the current state of affairs within and between departments and sections.
  - Tend to provide feedback which focuses on the negatives. (Primarily an issue for Eng.Svcs., Eng.&Des., and Eng.Proj.)

Also, there was an expressed need to see more of the Vice President and Directors and to hear more from them about items of importance with GPUN, Technical Functions, and the departments.

5. The key division interface cited as requiring attention was EP&I. This interface was identified as needing improvement primarily by Engineering Projects. The problem seems to be:
- EP&I is slow to respond and often misses schedules.
6. Plant interactions are not what they should be. There is a general sense that more interaction, other than through paper, is required. While Oyster Creek is the primary problem, both plants can benefit from improved interactions with Parsippany. Four inter-division interfaces clearly need improvement:
- Oyster Creek Plant Engineering and Engineering & Design.
  - Oyster Creek Chemistry and Reading.
  - Oyster Creek and Engineering Projects.
  - TMI and Engineering Projects.



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### B. Recommendations

Phases One and Two of this overall effort were directed toward the attainment of four objectives:

1. To identify problems/concerns requiring attention within and outside the division.
2. To begin resolving critical problems/concerns; and to begin developing strategies for sustaining an ongoing problem solving effort.
3. To identify and eliminate, or substantially reduce, organizational elements hindering division, department, and individual productivity and effectiveness.
4. To begin the process of fostering a collaborative approach to solving problems, improving productivity, and enhancing intradivisional and interdivisional interfaces.

The recommendations which follow are directed toward the achievement of these objectives.

1. Top management, i.e., the Vice President and Directors need to meet and:
  - Review the results of Phase Two.
  - Review the recommendations.
  - Identify the key items (results and behaviors) they want rewarded within the organization.
  - Identify organizational elements inhibiting these desired results and behaviors (some of which are contained in this report).
  - Plan for the feedback of results to the organization.
2. The results of this report need to be fed back to all levels within the organization. This feedback should not focus on finding fault or placing blame; but, rather, should focus on clarifying the data, opening a dialogue, and outlining action steps to be taken. Unique findings, especially if sensitive, should only be fed back to the groups to which they pertain. A suggested sequence for the feedback follows:
  - Vice President to Directors.
  - Directors to their managers and supervisors, either together or by level (Vice President may or may not attend).
  - Directors to all employees - with managers and supervisors in attendance. (This may take a series of meetings and the Vice President may or may not attend.)

The reasons for suggesting that directors handle the feedback are: to insure uniformity of the feedback; to minimize placing blame and fault finding; and to demonstrate top management support.

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3. Planning meetings should be held at Parsippany, Reading, Oyster Creek, and TMI by all levels of managers, at least once every two months. In most departments, this will mean meetings at three management levels through the director. These meetings, if not already being held at the Vice President level, are recommended.

The focus of these meetings should be on identifying barriers impeding the effective functioning of the group; developing action steps to remove these barriers; solving key group problems; and identifying and capitalizing on opportunities for improving collaboration/coordination within the division and with the plants. In essence, these meetings provide for a look at the present with a view toward improving the functioning of the group in the future.

Results of meetings, including unresolved dilemmas, need to be integrated; and a bottom-up approach is recommended. This allows managers at successively higher levels to deal more with issues in common; thus, providing a common thrust. Decisions made at the top management level then need to be communicated downward.

These meetings, if properly conducted, can make a significant contribution toward resolving the planning, scheduling, and coordination/collaboration issues addressed in the "Summary Conclusions". Further, they put in place an ongoing process for resolving critical problems/concerns and begin the process of fostering a collaborative approach to solving problems. They will provide, also, a vehicle for identifying opportunities for bringing together sub-groups from different departments, sections, and locations to work on issues in common.

4. Assistance on how to conduct effective planning meetings needs to be provided to those managers and supervisors who need it. Assistance in the form of monitoring meetings and providing one-on-one coaching is recommended.
5. The first two levels of supervision should be exposed to management training (on an as needed basis) which provides concepts and skills in the areas of: developing effective work teams; setting clear objectives and measuring performance; developing win/win strategies; conducting effective performance reviews; motivating people; delegation; and developing effective interpersonal relationships. This training can make an important contribution to resolving the management interface issues outlined in the "Summary Conclusions".

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6. Procedures and workload issues need to be explored further to determine what specific actions should be taken. The recommended feedback and planning meetings provide a forum for doing this.
7. Managers, supervisors and engineers need to spend more time at the plants, especially Oyster Creek, performing walk downs; participating in tests conducted by Startup and Test; and, generally building relationships with those they need to work with.
8. Top management (the Vice President and Directors) need to communicate more clearly to the rest of the organization their goals and priorities.
9. The following interface meetings need to be held to explore difficulties and develop more effective ways of working together:
  - EP&I and Engineering Projects; O.C. & TMI (Manager level meeting)
  - Oyster Creek. Plant Engineering, and Engineering and Design (Director level meeting)
  - Oyster Creek and Engineering Projects (Director level meeting)
  - TMI and Engineering Projects (Director level meeting)
  - Oyster Creek Chemistry and Reading (Manager level meeting)

A third party facilitator may prove helpful during some or all of these meetings.

10. The Vice President, Technical Functions should have separate meetings with the Vice Presidents of Oyster Creek and TMI. These meetings should precede the meetings listed above, and should focus on paving the way for the subsequent meetings; i.e., gaining agreement from the plant Vice Presidents that they support meetings of the type proposed in #9 above and will communicate this to the plant directors and managers who will be involved. Without this agreement, meeting results are likely to be far less productive than they could be.

People tend to support what they help create. These recommendations have been developed with this in mind.

Respectfully submitted,

  
Andrew J. Miller Associates

APPENDIX 1

## The Interview Questions

1. What do you understand your job to be?
2. What do you do? (Expanded to include: What should you be spending more time on and less time on?)
3. What are your measures of success?
4. What are your major problems/concerns?
5. What keeps you from being as effective as you could be?
6. What keeps your organization from being as effective as it could be?
7. What are your critical interfaces within and external to the division and how are these going?
8. What tends to get rewarded/discouraged within your organization?
9. What other suggestions do you have for improving organization effectiveness within the division?