

# UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF NINE MILE POINT 1 RESTART

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission  
One White Flint North  
Rockville, Maryland

Monday, May 14, 1990

The Commission met in open session, pursuant  
to notice, at 10:00 a.m., Kenneth M. Carr, Chairman,  
presiding.

COMMISSIONERS PRESENT:

KENNETH M. CARR, Chairman of the Commission  
THOMAS M. ROBERTS, Commissioner  
KENNETH C. ROGERS, Commissioner  
JAMES R. CURTISS, Commissioner  
FORREST J. REMICK, Commissioner

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## STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

DR. THOMAS MURLEY, Director, NRR

THOMAS MARTIN, Regional Administrator, Region I

ROBERT MARTIN, Project Manager, Nine Mile Point  
Nuclear Station

WILLIAM COOK, Senior Resident Inspector, Nine  
Mile Point Nuclear Station

WILLIAM DONLON, Chairman of the Board and CEO,  
Niagara Mohawk Power Corporation

JACK ENDRIES, President, Niagara Mohawk Power  
Corporation

LAWRENCE BURKHARDT, Executive Vice President,  
Nuclear, Niagara Mohawk Power Corporation

JAMES WILLIS, General Superintendent of Nuclear  
Generation

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P-R-O-C-E-E-D-I-N-G-S

10:00 a.m.

CHAIRMAN CARR: Good morning, ladies and gentlemen.

The purpose of today's meeting is for the Commission to be briefed on the status of Nine Mile Point Unit 1, which has been shut down since December of 1987. The Commission was last briefed on this subject in August of last year.

We will first hear from the facility licensee, Niagara Mohawk Power Corporation, and then from the NRC staff. The plant has been on the list of facilities that NRC will monitor closely for almost two years. The Commission is particularly interested in hearing from the licensee about how restart programs are progressing and hearing from the staff about the effectiveness of those programs.

I understand that copies of the presentation slides are available at the entrance to the meeting room.

Do any of my fellow Commissioners have opening remarks?

I would like to welcome the representatives from Niagara Mohawk Power Corporation who are here today.

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1           Mr. Donlon, please proceed with your  
2 presentation.

3           MR. DONLON: Good morning, Mr. Chairman and  
4 Commissioners. I am William J. Donlon, Chairman of  
5 the Board and Chief Executive Officer of Niagara  
6 Mohawk Power Corporation. I appreciate the  
7 opportunity to speak with you this morning regarding  
8 Niagara Mohawk's readiness for restart of Nine Mile  
9 Point Unit 1.

10           I have to say that I am proud of the work  
11 that our employees have put forth in bringing Niagara  
12 Mohawk Nine Mile Point Unit 1 back to safe and  
13 reliable operation. Sustaining the effort over a  
14 period of two and a half years has, frankly, been very  
15 difficult. But as the results show, we believe, our  
16 people have been up to the task.

17           Here with me at the table today are a few of  
18 the key managers who have guided us during this  
19 period. Seated on my left is Jack Endries, the  
20 Corporation's President, who will bring you up to date  
21 information on financial and state regulatory matters  
22 in New York State. On my right is Larry Burkhardt,  
23 Executive Vice President of the Corporation. Larry,  
24 of course, as you know I'm sure, has total  
25 responsibility for nuclear operations at Niagara

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1 Mohawk. Next to Larry is Jim Willis, who is General  
2 Superintendent of Nuclear Generation.

3 In addition, other key members of our  
4 operation and support staffs are seated behind us and  
5 are available to answer questions that you may have as  
6 the program proceeds.

7 Our preparations for restart of Nine Mile 1  
8 are nearly complete. While this near-term goal is  
9 important, its achievement will not divert us from our  
10 vision to become one of the best nuclear utilities in  
11 the United States. When we met with you last August,  
12 we told you about our process for restart and some of  
13 the progress achieved in implementing our restart  
14 action plan. We also explained the nuclear  
15 improvement program, which is our long-term  
16 improvement program to assure continued improvement  
17 after restart.

18 Today we will focus on specific examples of  
19 our improved performance and why we believe from a  
20 management and from a people standpoint we are ready  
21 for resumption of operation. We will also discuss the  
22 final steps in making the plant physically ready for  
23 restart.

24 This restart effort has not been easy. It  
25 has taken far longer than we had hoped, but I am proud

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1 to say that we have devoted the time necessary to do  
2 it right and that we have done it right. We don't see  
3 restart as an end to our efforts. In fact, it's  
4 really only a beginning. We will continue to focus on  
5 improving communications, teamwork, problem  
6 identification, problem solving skills and self-  
7 assessment. We know that we must continually improve  
8 our corporate culture and our management effectiveness  
9 and we are committed to do so. Marching in place  
10 simply will not do where we are concerned, or for that  
11 matter any nuclear utility is concerned.

12 Before I turn the presentation over to Larry  
13 Burkhardt, I want to briefly mention one matter. As  
14 you may know, Larry will be completing his two year  
15 full-time commitment to Niagara Mohawk in November.  
16 Larry will remain on our Board of Directors and remain  
17 on our Nuclear Oversight Committee and will serve as a  
18 consultant to us, so we still will have access to his  
19 knowledge and his experience. Larry, frankly, has  
20 been the inspiration and the catalyst in our long  
21 struggle to solve the many problems that faced us, and  
22 I want to publicly thank Larry for that.

23 While we will all be sorry to see Larry  
24 leave full-time employment with us, we have taken  
25 steps to assure that this change will not affect the

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1 continued improvement of our nuclear operations.

2 We have completed a nationwide search to  
3 choose a successor for Larry, and from among the  
4 highly talented and capable people we interviewed and  
5 screened, we have selected Mr. Ralph Sylvia. Mr.  
6 Sylvia is currently Senior Vice President-Nuclear at  
7 the Detroit Edison Company. Since 1986, Mr. Sylvia  
8 has been responsible for all nuclear-related  
9 activities for the company which includes the Fermi  
10 Nuclear Station.

11 Overall, Mr. Sylvia has had some 20 years of  
12 experience in the construction and operation of  
13 nuclear plants. Prior to joining Detroit Edison in  
14 1986, he served with a consulting firm for three years  
15 and prior to that Mr. Sylvia served as Vice President  
16 Nuclear Operations at the Cincinnati Gas and Electric  
17 Zimmer Nuclear Station from 1981 to 1983 and held  
18 various managerial and engineering positions at the  
19 Virginia Electric Power Company fossil stations and at  
20 the North Anna and Surry Nuclear Stations from 1962 to  
21 1981.

22 Mr. Sylvia will join Niagara Mohawk's  
23 Nuclear Division effective July 1 as Senior Vice  
24 President Nuclear Operations, reporting to Mr.  
25 Burkhardt, and will serve in a transition role under

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1 Mr. Burkhardt until November when Larry departs. We  
2 look forward to Mr. Sylvia joining our nuclear team.

3 I'm also very pleased to inform you that  
4 effective July 1 also, Mr. Joseph Firlit will be  
5 joining our Nuclear Division as Vice President Nuclear  
6 Generation, initially reporting to Mr. Burkhardt. Mr.  
7 Firlit will be responsible for overall site  
8 operations, replacing Jim Willis who will retire from  
9 the company during the summer. Mr. Firlit brings with  
10 him a 25 year career as an engineer and manager at  
11 fossil and nuclear generating plants, with ten years  
12 experience in managing various aspects of nuclear  
13 operations.

14 Since August of 1989, Mr. Firlit has been a  
15 consultant at Nine Mile Point on matters related to  
16 plant operations. In this capacity, he has gained an  
17 intimate knowledge of our nuclear operations and has  
18 contributed to a number of improvements. Prior to his  
19 current position, Mr. Firlit was the Chief Executive  
20 Officer Nuclear for the Sacramento Municipal Utility  
21 District, operator of the Rancho Seco Nuclear Station  
22 prior to the final disposition of that matter there.  
23 He was very instrumental in turning around that unit,  
24 however, which as you gentlemen know would be  
25 operating today were not the situation to occur that

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1 did in that city.

2 We are confident that these individuals will  
3 provide the leadership to carry on our commitment to  
4 excellence in our nuclear program.

5 Now I will turn to Larry Burkhardt for his  
6 presentation.

7 Larry?

8 MR. BURKHARDT: Good morning, gentlemen. It  
9 is a pleasure to speak with you again as Nine Mile  
10 Point Unit 1 approaches restart.

11 (Slide) Last August I described the status  
12 of our activities directed at the restart of Unit 1.  
13 Today I am pleased to report that we have come a long  
14 way since we shut the plant down in late 1987,  
15 and even since last August, both in terms of returning  
16 the plant to a satisfactory material condition and in  
17 remedying the management and organizational issues  
18 that faced us. The activities necessary for restart  
19 of Unit 1 have been substantially completed. The  
20 remainder are being carefully monitored by Niagara  
21 Mohawk management and are being worked off in a  
22 controlled but aggressive manner.

23 Based on our continuing self-assessment and  
24 independent evaluations, we are convinced that we have  
25 come to grips with the underlying management and

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1 teamwork issues responsible for the decline in our  
2 performance as a nuclear utility. While we continue  
3 to detect and correct identified deficiencies, we are  
4 confident of our ability to resume safe and reliable  
5 operation of Unit 1. Niagara Mohawk has the  
6 management and leadership skills necessary to safely  
7 operate Unit 1 and assure continued safe operation of  
8 Unit 2. Once we are convinced of the physical  
9 readiness of Unit 1, we will report our readiness for  
10 restart and request concurrence from the Region I  
11 Administrator.

12 As background, I wish to address a number of  
13 elements of our restart program, to tell you about  
14 some of our achievements and some of our setbacks and  
15 how we cope with them. I will call on a few of my  
16 people to provide concrete examples of improvements we  
17 have seen. I will talk about my reasons for  
18 concluding that we have made substantial and  
19 demonstrable progress in resolving previous areas of  
20 weakness related to our management and organization,  
21 the five underlying root causes that our restart  
22 action plan identified.

23 Before I address our restart effort, I want  
24 to pick up on what Bill Donlon had to say about my  
25 successor and tell you how I expect the transition

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1 will be accomplished. We will conduct a thorough and  
2 orderly turnover, bringing Ralph Sylvia on board in  
3 July. Ralph is eminently qualified to lead our  
4 Nuclear Division, having very successfully performed  
5 in that capacity for Detroit Edison. He will relieve  
6 me when he is ready, about November 1990. I will be  
7 staying on as a member of the Board of Directors and  
8 the Nuclear Oversight Committee, as well as a part-  
9 time advisor to top management and to the Nuclear  
10 Oversight Committee.

11 Because some time has passed since we last  
12 met, I will briefly reacquaint you with the major  
13 elements of our restart process and then focus on the  
14 progress we have made since August.

15 (Slide) By way of background, Nine Mile 1  
16 is a BWR 2 with a Mark I containment and Unit 2 is a  
17 BWR 5 with a Mark II containment. Unit 1 operated for  
18 a long and relatively successful period from 1969  
19 until 1987. Previously, record runs were the measure  
20 of success. However, after the Third Mile Island  
21 accident, improving nuclear industry standards were  
22 not maintained at Niagara Mohawk. The company was not  
23 aggressive in assessing and correcting continuing  
24 problem areas. Standards were set to be compliant  
25 rather than to achieve excellence. This led to

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1 performance problems.

2 In December '87, we shut down Nine Mile 1  
3 due to excessive vibration in the feedwater system.  
4 During the shutdown, we found and committed to resolve  
5 identified problems associated with the in-service  
6 inspection program. In the course of the outage,  
7 additional technical and management deficiencies were  
8 identified by Niagara Mohawk and by the Nuclear  
9 Regulatory Commission staff. These deficiencies led  
10 to issuance of Confirmatory Action Letter 88-17, dated  
11 July 24th, 1988.

12 As a result of the Confirmatory Action  
13 Letter, a restart action plan was developed using  
14 input from throughout the nuclear organization to  
15 determine, analyze and propose corrective actions  
16 where problems were encountered and weaknesses  
17 experienced. The plan was enhanced by feedback and  
18 buy-in from all levels of personnel from Operations,  
19 Engineering and support organizations. The restart  
20 action plan was submitted on December 22nd, 1988 and  
21 after two clarifying revisions was approved by the NRC  
22 staff on September 29th of last year.

23 (Slide) In developing the restart action  
24 plan, we determined the root causes of line  
25 management's ineffectiveness in recognizing and

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1 remedying problems. Then, through continual  
2 evaluation, Niagara Mohawk's line managers were  
3 required to demonstrate their improving problem  
4 solving skills.

5 The restart action plan addressed 18  
6 specific issues which are included in your handout  
7 and, more importantly, it identified and provided  
8 corrective actions for the five underlying root causes  
9 of our management and organizational ineffectiveness.

10 Our plan also contains summaries of long-  
11 term strategies for continued actions after restart.  
12 These actions are detailed in a nuclear improvement  
13 program and establish levels of performance for  
14 continued improvement beyond that required for  
15 restart.

16 Niagara Mohawk recognizes that fully  
17 addressing the underlying root causes is necessarily a  
18 long-term effort involving, among other things,  
19 cultural change, but a change in the leadership  
20 culture of our Nuclear Division is already well  
21 underway.

22 Our nuclear improvement program was  
23 developed in parallel with the restart effort. It  
24 includes near-term and long-term actions across our  
25 entire nuclear program. This is our bridge to the

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1 future which will assure sustained progress toward  
2 excellence and our vision of becoming the best.

3 Furthermore, we established a comprehensive  
4 independent restart self-assessment effort to function  
5 in parallel with the restart work. That independent  
6 effort, headed by a senior restart review panel and  
7 staffed by a team of assessors, started over a year  
8 ago and not only monitored progress toward completion,  
9 but also monitored our line management's assessment of  
10 that progress. The independent restart self-  
11 assessment, completed this past September, involved  
12 over 6,000 manhours of effort and concluded that  
13 satisfactory progress in management effectiveness had  
14 been achieved to support readiness for restart. This  
15 provided the basis for our restart readiness report,  
16 submitted on September 8th, 1989. Subsequently, we  
17 have reconfirmed our readiness to restart during two  
18 follow-on assessments by our Independent Assessment  
19 Group.

20 We have made personnel changes and  
21 strengthened the organization. In your handout are  
22 organization charts. Note on these organization  
23 charts that the positions marked by an asterisk have  
24 either new incumbents or new reporting relationships.  
25 These changes have occurred since February 1988.

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1 (Slide) Let me point out some of these  
2 changes.

3 We have moved the Quality Assurance  
4 Department into the Nuclear Division to make QA part  
5 of the team and provide additional visibility of QA  
6 concerns to senior nuclear managers.

7 We have established a new projects group to  
8 focus on reporting, business planning and outage  
9 management.

10 We have established a new Independent  
11 Assessment Group, headed by Linda Zimmerman, who is  
12 here with us today, and that group promotes  
13 development of self-assessment within the line  
14 organization. This group evaluates management  
15 effectiveness and adherence to our standards of  
16 performance.

17 We have reorganized the generating arm of  
18 the division under Jim Willis, General Superintendent.  
19 Most of the key people are new players.

20 We have added systems engineering and site  
21 engineering groups to better support Operations.

22 I will now review results found by our self-  
23 assessment for each of the underlying root causes.  
24 For each area, the underlying root cause is listed in  
25 your handout and abbreviated on the slide. I will

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1 cover our status and some examples.

2 (Slide) The first underlying root cause,  
3 planning and goal setting. The restart action plan  
4 required the development of vision and goals for the  
5 Division. The assessment results confirmed that the  
6 desired information, contained on our wallet cards  
7 along with the standards of performance, was known  
8 throughout the Division. You may recall in August  
9 that I gave each of you one of those wallet cards.  
10 Today we have provided you a copy of the 1990 update  
11 of the card. As expected, the upper levels of  
12 management were better versed in the information than  
13 people at the worker level.

14 A continuing planning process has been  
15 developed through the nuclear improvement program and  
16 the business plan to assure continued safe and  
17 reliable plant operation.

18 An integrated priority system has been  
19 developed, pilot tested, and is being implemented.

20 The NRC Integrated Assessment Team  
21 Inspection found in October of 1989 that Niagara  
22 Mohawk had clearly improved its performance in the  
23 areas of planning and goal setting. Further, our  
24 follow-on assessments and the NRC Readiness Assessment  
25 Team inspection last week have confirmed sustained

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1 improvement in this area.

2 (Slide) The second underlying root cause,  
3 problem solving. Our initial efforts focused on  
4 identification of problems and an examination of their  
5 causes. A division-wide identification effort was  
6 carried out and in the process over 1900 problem  
7 reports were generated. These problem reports were  
8 reviewed, segregated into those needing action before  
9 restart or after restart and integrated into the  
10 restart schedule where appropriate.

11 The restart action plan long-term strategies  
12 were to develop an integrated deficiency reporting  
13 system, to provide training to employees to recognize  
14 and respond to problems, to upgrade the root cause and  
15 trending program, and to implement a lessons learned  
16 system throughout the Division.

17 We are already developing an integrated  
18 deficiency reporting system. We have conducted  
19 training for all employees on the current problem  
20 solving processes and have improved our root cause and  
21 trending.

22 The NRC Integrated Assessment Team  
23 inspection in October noted some improvement in  
24 problem solving. While we consider that they did not  
25 identify any new technical issues which would affect

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1 restart, they did note two problems which we have  
2 fixed. The NRC Readiness Assessment Team inspection  
3 last week noted clear improvement in the areas of  
4 problem solving and that improved root cause  
5 evaluations are now being performed. They noted  
6 appropriate use of outside help, including Engineering  
7 support.

8 Specifically, in a recent problem with the  
9 reactor building closed loop cooling heat exchangers,  
10 they saw good problem resolution, technical evaluation  
11 and lessons learned. We have had a wealth of  
12 experience in problem solving as we have dealt with  
13 the thousands of actions required during this outage.  
14 This has been particularly evident as we have resolved  
15 about 60 significant emergent problems such as those  
16 heat exchangers that have arisen as we proceeded  
17 toward restart. Resolving these tough problems has  
18 helped us improve our management effectiveness, but  
19 slowed our physical completion.

20 (Slide) The third underlying root cause,  
21 organizational culture. Corrective actions focused on  
22 better communication with employees and with training  
23 of division management to improve their interpersonal  
24 and leadership skills.

25 In addition, we looked for upper levels of

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1 Nuclear Division management to be exhibiting behaviors  
2 which reflected an appreciation of the needs of our  
3 employees.

4 A few examples of the key behavioral changes  
5 being modeled by the upper levels of management are as  
6 follows: a greater degree of management by walking  
7 around; more frequent solicitation of subordinate  
8 input; more widespread use of self-assessment with the  
9 desire for improvement; and better communication  
10 emphasizing the chain of command.

11 I'd like now to ask Kim Dahlberg, the Unit 1  
12 Station Superintendent, to provide an example of  
13 management by walking around.

14 Kim?

15 MR. DAHLBERG: Thank you, Mr. Burkhardt.

16 I'm Kim Dahlberg, the Nine Mile Point Unit 1  
17 Station Superintendent.

18 One of the attributes of our management by  
19 walking around is what we call our senior managers and  
20 recognition tour. The acronym is SMART. One of the  
21 tours that I performed was over in training. The area  
22 that I was assessing is the professional development  
23 area of a number of ops management people. And one of  
24 those areas that I looked at was the supervisory  
25 skills area. What I found when I was there, that a

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1 number of people had taken the class and a number of  
2 them hadn't taken the class. Those that hadn't taken  
3 the class were excused but there wasn't an area to  
4 reschedule those people. And I'd like to say that  
5 those people have been rescheduled and we have a plan  
6 in place to look at a list of when a person has been  
7 rescheduled to make sure that person attends that  
8 training.

9 Thank you.

10 MR. BURKHARDT: Thank you, Kim.

11 Regarding organizational culture, the NRC  
12 Integrated Assessment Team inspection last October,  
13 our follow-on assessments, and the NRC Readiness  
14 Assessment Team inspection last week all reported that  
15 Niagara Mohawk has continued to make good progress and  
16 has clearly improved our performance in this area.

17 The fourth underlying root cause, standards  
18 of performance and self-assessment. This is really a  
19 two part root cause. With regard to the first part,  
20 standards of performance, we committed to develop and  
21 disseminate an initial set of Nuclear Division  
22 standards of performance, using the chain of command  
23 to assure that policies and procedures are understood  
24 and being implemented. Related to the second part,  
25 self-assessment, our commitments were to conduct the

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1 restart readiness self-assessment as a model for our  
2 continuing self-assessment efforts, to establish an  
3 Independent Assessment Group and integrate that group  
4 with existing assessment activities.

5 The restart assessment results showed that  
6 all activities for this root cause required by the  
7 restart action plan were met. As an illustration of  
8 the importance of the standards of performance, many  
9 groups have gone beyond the division level and the  
10 department level and have begun tailoring the  
11 department level performance standards to include  
12 relevant examples on their individual performance  
13 planning work sheets. These are personal goal sheets  
14 which are part of their annual performance evaluation.

15 Another example is the Radiation Protection  
16 Department has self-assessment implementing procedures  
17 that instruct their personnel how to assess against  
18 the standards of performance by outlining specific  
19 observable behaviors in their department that support  
20 each standard.

21 Our assessment results showed that self-  
22 assessment was becoming a way of life with the senior  
23 and mid-level managers and, somewhat ahead of our  
24 implementation plan, the self-assessment process in  
25 many departments was carried down to the worker level.

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1 The link between self-assessment and the standards of  
2 performance has been established. Managers and  
3 supervisors are being held accountable by their  
4 employees and holding their employees accountable as  
5 well for modeling our standards of performance.

6 Linda Zimmerman, our Independent Assessment  
7 Group manager, will explain this process and provide  
8 some examples of self-assessment.

9 Linda?

10 MS. ZIMMERMAN: Thank you.

11 Good morning. My name is Linda Zimmerman  
12 and I'm the manager of the independent assessment  
13 group.

14 Mr. Burkhardt has described our divisional  
15 self-assessment process and I'm going to give you some  
16 examples of the informal as well as the formal type of  
17 self-assessment that goes on, the informal self-  
18 assessment being the kind of self-assessment that  
19 employees do on a daily basis against the standards of  
20 performance.

21 I'd like to go back about a month ago. I  
22 was observing a shift crew training and during the  
23 training, at the end of the training, they were going  
24 over the procedure for the particular area. In this  
25 case it was control rod drive hydraulics.

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1           There was a concern by one of the operators  
2     in the training course that the procedure was not as  
3     clear as it could be and that operator felt that  
4     something needed to be done about it. The training  
5     instructor asked the operator what would be done if we  
6     were in a normal operating time if he weren't in  
7     training. The operator replied that he would use the  
8     chain of command to get clarification on the procedure  
9     and that if need be he would go all the way up to the  
10    ops superintendent to find out exactly what needed to  
11    be done. The training instructor said that he did not  
12    want the class to end until someone took the action to  
13    get this procedure clarified. One of the operators  
14    took that action and, as a follow-up, filled out the  
15    necessary paperwork and followed the procedure in  
16    terms of getting a procedure clarified.

17           I brought that example up really to tell you  
18    that those are the kinds of things that go on on a  
19    daily basis in terms of looking at our own performance  
20    and I think that was an excellent example of self-  
21    assessment in the area of problem identification  
22    resolution, looking at policies and procedures,  
23    quality, use of the chain of command, accountability  
24    and responsibility, and also teamwork between  
25    operations and training.

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1 I'd like to also give an example of a little  
2 more formal type of assessment. As Mr. Burkhardt  
3 mentioned, the Independent Assessment Group is  
4 responsible, or has been responsible for doing follow-  
5 on assessment since the issuance of the readiness for  
6 restart report. We concluded an assessment at the end  
7 of March. During that assessment, we did some reviews  
8 of operations management and we found that the  
9 operations management chain of command, in terms of  
10 the area of communication, was not as effective as we  
11 thought it could be.

12 As a result of that, in keeping with the  
13 philosophy of the Independent Assessment Group, we  
14 gave the operation's senior management some feedback  
15 on that concern and Kim Dahlberg will talk to you  
16 about the results of that feedback.

17 Thank you.

18 MR. DAHLBERG: I'm Kim Dahlberg, the Unit 1  
19 Station Superintendent.

20 As Linda said, we didn't hit the mark on  
21 communications within the -- between the operating  
22 crews and the ops management. One of the things we  
23 did, the next day my senior ops management staff got  
24 together and analyzed the data and reviewed the data  
25 to ensure that the data was correct. There were some

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1 areas that we had some -- there were some gray areas,  
2 but we decided that we certainly could improve our  
3 area of communication between the operating crews and  
4 their management. We took an action to adopt -- have  
5 each one of the senior ops manager personnel adopt one  
6 of the shifts to provide a focal point to get  
7 communication to the crew and also back to my ops  
8 superintendent. That area, what we've done is each  
9 week each crew sits down with their mentor, if you  
10 will, and goes over a particular topic. The first  
11 topic we talked about a few weeks ago was the  
12 standards of performance, and more specifically the  
13 area of communication of the standards of performance.  
14 One of the items that they go over each week, like I  
15 say a specific item they'll talk about with each of  
16 the crews, and then we'll sit down and discuss that  
17 particular issue and provide feedback down through the  
18 crews in a timely manner and also up the chain in a  
19 timely manner.

20 One positive note that I learned about last  
21 week, one of my licensed operators, ROs, who had  
22 anticipated about bidding out to another -- to a  
23 reactor analyst position, has decided to not only stay  
24 in the ops group, but has decided to take an assistant  
25 shift supervisor positions. One of the reasons that

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1 he gave was the communication that is now being  
2 improved within the ops organization.

3 MR. BURKHARDT: Thank you, Kim.

4 The NRC Integrated Assessment Team  
5 inspection found a number of deficiencies in this area  
6 in October. For example, the initial system and area  
7 walk downs for core reload, a new initiative at that  
8 time, did not receive sufficient supervisory review  
9 and did not meet management expectations. This  
10 deficiency was corrected by repeating the walk downs  
11 with management and supervisor assessment. The NRC  
12 Readiness Assessment Team inspection noted last week  
13 that standards of performance and self-assessment  
14 showed good improvement, with good procedural  
15 adherence and a good understanding of management  
16 expectations.

17 Our ongoing self-assessment continues to  
18 detect deficiencies. While I am never pleased with  
19 deficiencies that we discover daily, I am pleased that  
20 we are discovering them, reporting them, establishing  
21 accountability, and fixing them. Of course, we still  
22 have a way to go before everyone in the division  
23 effectively applies all the standards of performance  
24 to his work. This is the vision of excellence we seek  
25 and we won't be satisfied until we fully achieve it.

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1           (Slide) The fifth underlying root cause was  
2 teamwork. The restart action plan focused on the need  
3 to communicate to our employees the value of improved  
4 teamwork. It also provided for the establishment of  
5 an integrated team of selected managers from the  
6 Nuclear Division, headed by Kim Dahlberg, and included  
7 support organizations.

8           Our assessment results showed the most  
9 improvement in this area. The interpersonal skills  
10 taught by the organizational development specialists  
11 helped people to work out antagonisms which had become  
12 part of the old culture. Team building sessions  
13 between Engineering and Generation provided the  
14 opportunity for each department to see itself from the  
15 perspective of the other group. The cooperation  
16 between these two departments is much improved and  
17 continues to improve as more people are trained in  
18 communication and conflict resolution skills.

19           Similar improvements have occurred between  
20 Training and Operations, through the creation and use  
21 of the Operator Training Program Advisory Committee,  
22 and we have a committee at each unit. The NRC  
23 Integrated Assessment Team inspection saw clear  
24 improvement in October 1989 and commented on good  
25 cooperation and communication. We are not, however,

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1 resting on our oars in this area. We are continually  
2 pointing out examples of good and poor teamwork to one  
3 another. For example, there were 394 examples of  
4 teamwork and use of the chain of command counted on  
5 the departmental self-assessment forms in a four month  
6 period. Of these 394 examples, 84 percent were  
7 positive. The NRC Readiness Assessment Team  
8 inspection last week noted marked improvement in  
9 teamwork even since last October.

10 (Slide) I will now discuss how we have  
11 measured our progress and where we stand on some of  
12 the physical readiness issues. The restart self-  
13 assessment confirmed that Niagara Mohawk's current  
14 line management has the appropriate leadership and  
15 management skills to prevent or detect and correct  
16 future problems. The assessment found that the  
17 Nuclear Division and support organizations have  
18 adopted high standards of performance which are being  
19 demonstrated in the identification and effective  
20 resolution of problems. The assessment also found  
21 that the corrective actions that we had put in place  
22 had improved planning and teamwork in making decisions  
23 and solving problems related to performance limiting  
24 deficiencies. Finally, the assessment identified  
25 programs and policies that had been developed to

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1 continue to enhance the assessment and improvement of  
2 activities of the Nuclear Division.

3 Prior to submitting the restart readiness  
4 report to the NRC last September, Niagara Mohawk  
5 invited INPO to perform an assist visit of Nine Mile 1  
6 in August, 1989. The results of that visit showed  
7 substantial progress in resolving performance problems  
8 since their March 1989 evaluation and significant  
9 improvements in all areas, thus reinforcing our  
10 conclusions.

11 We have reviewed the current SALP, which was  
12 issued last week, and the recent inspection and  
13 enforcement actions and believe that we are dealing  
14 effectively with the issues raised and are ready to  
15 restart Unit 1. The SALP notes a turning point in our  
16 performance, clearly indicating that we are improving.  
17 We were pleased that the Engineering and Technical  
18 Support area was rated higher and that Security and  
19 Emergency Planning continued with high marks. We will  
20 work to reach the across-the-board excellence we seek.  
21 We will provide our written comments to the NRC and  
22 meet with them to discuss our SALP response in detail.  
23 The NRC Readiness Team inspection last week noted that  
24 in the areas where we had SALP 3 ratings, our progress  
25 began to demonstrate improvement late in the SALP

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1 period and they saw clear improvement in those areas  
2 last week.

3 (Slide) As of May 11th, last Friday, we had  
4 11 restart action plan corrective action items open  
5 and nine assessment open items from the restart  
6 readiness report. These are linked to and will close  
7 out upon completion of the physical work in the field.

8 (Slide) As of May 11th, we had 720 work  
9 items open, of which 223 are physical plant work  
10 requests. To put that in perspective, we have  
11 completed over 32,000 work items which represent such  
12 things are work requests, surveillance tests, in-  
13 service inspection exams, problem reports and  
14 modifications during this outage.

15 Just a note on maintenance backlog. At Unit  
16 1, the post restart backlog will be less than 500.  
17 Right now it's 485, of which 61 are safety related.  
18 And for Unit 2 we are currently at less than 1500 non-  
19 outage work items and on track to be down to 1200 by  
20 the first refueling outage in September, and we will  
21 complete 736 outage-related work items by the end of  
22 that outage. Of the 1500 backlog, 389 of them are  
23 safety related.

24 (Slide) As with any refueling outage, we  
25 will complete our remaining post refuel testing

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1 activities such as the shutdown margin test, reactor  
2 vessel hydrostatic test, and emergency core cooling  
3 system loss of off-site power test. Our routine  
4 activities also include performance of regularly  
5 scheduled surveillances to meet the tech spec  
6 requirements, valve lineups and other operability  
7 checks such as post-maintenance testing, preventive  
8 maintenance and equipment qualification checks.

9 (Slide) We have strengthened many of the  
10 programs for return to service due to the length of  
11 the outage as indicated in your handout. The  
12 following are some examples.

13 We developed special administrative control  
14 procedures for reload, restart and power ascension.  
15 These procedures provide strict administrative control  
16 of open issues and items. We conducted special crew  
17 training in start-up, shutdown and power ascension  
18 procedures as part of our ongoing simulator training.  
19 This training provides further assurance of our good  
20 performance upon restart.

21 (Slide) I will now provide an overview of  
22 our power ascension program. It will include a group  
23 of power ascension tests, normally and specially  
24 scheduled surveillance tests and personnel performance  
25 assessments. The program has been reviewed with the

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1 NRC staff.

2 (Slide) The power ascension tests were  
3 selected based on a review of the initial Unit 1 test  
4 program, Unit 2 start-up experience, Reg. Guide 168 on  
5 start-up testing, plant modifications performed during  
6 the outage, and restart programs from other units.  
7 The list of power ascension tests is provided in your  
8 handout.

9 (Slide) The program includes three phases  
10 that correspond with plateaus of stable operation,  
11 that is 25 percent power, 60 percent and 100 percent  
12 power. The review of the power ascension tests at  
13 each plateau will be performed by our Site Operations  
14 Review Committee. The committee will recommend to  
15 senior management when they consider the plant ready  
16 to proceed to the next level of power testing. I will  
17 make the determination of readiness to proceed to the  
18 next power level, after I agree that the assessment  
19 effort is complete and satisfactory. And I will then  
20 inform the NRC staff of my decision before proceeding.

21 (Slide) The staged power ascension program  
22 allows us to perform personnel performance assessments  
23 in key Operations, Maintenance, Radiation Protection  
24 and Chemistry activities. The on-shift managers will  
25 conduct assessments of performance of testing and

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1 surveillances as well as teamwork, planning,  
2 communications and command and control. Further, our  
3 Independent Assessment Group will be looking at the  
4 performance of the managers and staff in a parallel  
5 assessment of the entire process, evaluating all areas  
6 in our standards of performance. Quality Assurance  
7 and our independent safety engineering group will  
8 participate in oversight functions as well. Key areas  
9 that we'll be looking at as part of the power  
10 ascension process include operator readiness,  
11 professionalism and attitude.

12 (Slide) We'll briefly update you on some  
13 other topics. First is operator requalification  
14 training. You may recall when we spoke last August  
15 that we talked about our difficulty with the new Unit  
16 2 operator requalification program. We had higher  
17 than the desired number of failures in that initial  
18 test. Following that initial requalification effort,  
19 we had an extensive month-long program to successfully  
20 remediate the operators. I can report to you today  
21 that Unit 2's NRC requalification exam last month  
22 resulted in a clean sweep. Fifteen of 15 operators  
23 were successful and three of three crews passed.  
24 Further, the Unit 1 operators NRC observed  
25 requalification in December in '89 resulted in 43 of

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1 44 operators passing all parts of the exam. One  
2 operator passed all but the job performance measures  
3 walk through portion and was promptly remediated.

4 In March of this year, seven of our training  
5 programs, five operator programs, as well as Chemistry  
6 and RP training, were placed on probation by the  
7 National Academy of Nuclear Training. The reason for  
8 probation was to allow us time to demonstrate the  
9 following: implementation of recent program changes;  
10 timely completion of open action items; sustained  
11 evidence of continued commitment of resources and  
12 commensurate action to maintain accreditation  
13 standards. The accrediting board agreed that our plan  
14 for accreditation renewal is sound and that good  
15 progress had already been shown. But frankly, they  
16 were still a little angry that all the promises made  
17 in 1986 had not been kept in the ensuing years.

18 INPO, on the other hand, was convinced that  
19 we were ready for accreditation renewal, but the  
20 independent board wanted a period of sustained  
21 evidence of that commitment. We fully expect renewal  
22 this September when we reappear before the accrediting  
23 board. We successfully completed an accreditation  
24 team visit for the remaining four accredited programs,  
25 mechanical, electrical I&C and technical staff, on

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1 April 27th of this year that helped confirm that we  
2 are on the right track.

3 As you may know, the accreditation process  
4 looks at training systems and processes, but does not  
5 examine the qualification of individual trainees.  
6 Observation, independent assessment and examination  
7 results confirm that our operators and technicians are  
8 fully qualified to safely operate and maintain our  
9 plants.

10 Since the mid-1970s, we have been monitoring  
11 the thickness of our torus wall. About two years ago,  
12 evaluations indicated that the torus wall thickness  
13 was approaching our Mark I analysis limits. A  
14 comprehensive monitoring program was established and  
15 extensive measurements are now taken every six months.  
16 The most recent measurements taken in February of this  
17 year did not identify any areas below the minimum  
18 required wall thickness. We have conservatively  
19 evaluated the data and determined the integrity of the  
20 torus will not be affected through the next refueling  
21 outage. We have evaluated permanent fixes to the  
22 torus wall thinning concern and determined that the  
23 use of stiffening rings appears to be the best option.  
24 That installation is planned during the 1992 refueling  
25 outage.

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1 Prior to this outage, we began an evaluation  
2 of our 125 volt DC system. As a result of this  
3 evaluation, we have replaced the 125 volt DC battery  
4 going from a 1500 ampere hour capacity to a 2230  
5 ampere hour capacity. We have tested and replaced our  
6 DC breakers and have made several wiring changes to  
7 ensure component operability. We are convinced  
8 through detailed analysis and testing that the 125  
9 volt DC system is fully capable of performing its  
10 safety function.

11 Recently, as I mentioned earlier, we  
12 identified tube leakage problems with our reactor  
13 building closed loop cooling heat exchangers. This  
14 was particularly bothersome since we had just  
15 installed these heat exchangers in early 1988 during  
16 the current outage. We have evaluated the cause of  
17 this rapid degradation and concluded that flow-induced  
18 vibration resulted in excessive wear on the tubes.

19 The heat exchangers are being modified.  
20 Portions of the tubes most affected by the vibration  
21 have been cut out. Our initial tests show that there  
22 is only minimal vibration at operating flows up to and  
23 above 3,000 gallons a minute. Administrative controls  
24 have been established to ensure that operating flows  
25 will be kept below this value. We will monitor this

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1 condition of the tubes closely during the next cycle  
2 and we are evaluating the need to further modify or  
3 replace these heat exchangers during the next outage.  
4 As I mentioned, the NRC Readiness Assessment Team  
5 noted last week that our response to this problem was  
6 considered good.

7 Currently we have five shifts of operators  
8 and a relief crew for Unit 1 and six shifts of  
9 operators and a relief crew at Unit 2. The reason for  
10 an additional shift at Unit 2 is because of the  
11 complexity of the plant and the level of surveillance  
12 tests they require.

13 Additionally, in 1990 we authorized  
14 increases in manpower for both units to provide for  
15 rotational operator positions and strengthen our  
16 career progression plan for operators. For  
17 Maintenance, we currently have authorized 378  
18 positions. Fifteen of these are open currently and we  
19 are actively seeking candidates.

20 In October of 1989, we performed an  
21 assessment of needed staffing and determined that  
22 approved maintenance and operational staffing were  
23 adequate based on a 70 plant industry average. We  
24 have sufficient qualified staff to operate and  
25 maintain both plants.

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1           With regard to Unit 2, Unit 2 performance  
2 continues to improve. We still have a way to go, but  
3 1989 performance improved over 1988. For instance, we  
4 had about half the number of licensee event reports,  
5 dropping from 70 in 1988 to 41 in 1989 and we look  
6 forward to continuing improvement this year and in the  
7 years to come. Also, we achieved a very low radiation  
8 exposure at Unit 2 of 61 manrems for 1989, the first  
9 full year of operation.

10           (Slide) We have already described the  
11 physical readiness activities which must be completed  
12 prior to restart. Our current schedule indicates that  
13 we will be ready for restart at the end of this month,  
14 on May 30th. That schedule is very aggressive and we  
15 still have tests to conduct which could require some  
16 corrective actions that may well extend the schedule.  
17 However, we don't foresee at this point any  
18 circumstances that would delay restart beyond June of  
19 this year.

20           The NRC Readiness Assessment Team inspection  
21 which was conducted the week of May 7th, yielded very  
22 positive results. The NRC team saw a significant  
23 change in individual expectations. They saw clear  
24 improvement in the underlying root causes 2 and 4,  
25 problem solving and self-assessment, and the other

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1 three root causes which were satisfactory at the  
2 October inspection showed continued improvement. We  
3 are following up on the one specific technical issue  
4 the team identified involving improved operational  
5 control of instrument root valves and will correct  
6 that prior to restart.

7 We have agreed with the NRC staff as to  
8 those matters which must be closed out prior to  
9 restart and that there are no NRC impediments to  
10 restart of the unit at this time.

11 As you know, the restart process includes  
12 the approval of the Regional Administrator. We will  
13 close out all remaining issues to our satisfaction  
14 prior to seeking NRC staff concurrence to restart the  
15 unit.

16 (Slide) We have confidence in our ability  
17 to operate both Units 1 and 2. Through continuing  
18 management by walking around, we touch base with all  
19 level of personnel to ensure that our management  
20 effectiveness is continuing to improve. For example,  
21 I spend four to six hours a week talking with small  
22 groups of people. At the end of last week, for  
23 instance, on Thursday, at 7:00 o'clock in the morning,  
24 I met with the Unit 1 electrical shop personnel. We  
25 talked for over an hour with a good give and take

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1 discussion about -- they were ready to come off the  
2 night shift because they had their backlog work down.  
3 And then last Friday at noontime, I met with one of  
4 the operating crews of Unit 2 who had just completed  
5 their week of training and we had a good session  
6 there. That was one of the crews who had passed their  
7 NRC requal exam the previous week with a clear sweep.

8 We are developing new attitudes through  
9 cultural changes using the chain of command and the  
10 standards of performance. Problems are being raised  
11 to management in a timely way and improved  
12 communications exists at each level in the division,  
13 both in and among different groups. We have measured  
14 this with various surveys and direct communications  
15 through our semi-annual town hall meetings where we  
16 meet with each member of the division during a two day  
17 period.

18 Looking to the future, we have developed a  
19 comprehensive tiered leadership training program, as  
20 well as an employee development and career path  
21 program. These programs start in July and will  
22 provide for tomorrow's leadership in the Nuclear  
23 Division. The Company's corporate-wide self-  
24 assessment program is including the major elements of  
25 our program in the corporate management development

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1 initiative. We have started the process to develop a  
2 broader base of management talent.

3 (Slide) In conclusion, self-assessment has  
4 confirmed that Niagara Mohawk's current line  
5 management does have the appropriate leadership and  
6 management skills to prevent or detect and correct  
7 future problems. As I said before, the assessment  
8 found that the Nuclear Division and support  
9 organizations have adopted high standards of  
10 performance which are being demonstrated in the  
11 identification and effective resolution of problems.

12 The painful lesson Niagara Mohawk has  
13 learned in the last two years is to seek excellence  
14 and avoid falling short of the mark at all costs.  
15 Falling short, as we did two years ago, has tremendous  
16 impact on finances, credibility and people. Perhaps  
17 the most insidious and corrosive impact is that  
18 instilling standards of excellence results in the  
19 continual discovery of more problems. These problems,  
20 although self-discovered, reduce credibility with the  
21 regulators, the public, the media and the rest of the  
22 corporation. Excellence is the only standard that  
23 pays off.

24 Final readiness for restart is, of course,  
25 subject to completion of the few remaining identified

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1 and defined actions as well as ongoing correction of  
2 any emergent problems before restart. Niagara Mohawk  
3 will describe the completion of these remaining  
4 actions in a letter reporting our readiness and  
5 requesting approval from the NRC Region. I  
6 Administrator for restart of Nine Mile 1.

7 Niagara Mohawk's management is fully  
8 committed to safety and quality in all nuclear  
9 operations. We will continue in our pursuit of  
10 excellence until we achieve our ultimate vision to be  
11 the best.

12 Thank you very much.

13 MR. DONLON: Thank you, Larry.

14 Before I conclude our presentation,  
15 gentlemen, I will ask Jack Endries to address our  
16 ongoing interaction with the New York State Public  
17 Service Commission, which we know is of interest to  
18 you.

19 MR. ENDRIES: Thank you, Bill.

20 Good morning. When I discussed the  
21 company's financial position last August, I told you  
22 that we were hopeful that our pending rate case could  
23 be resolved through negotiations with the Public  
24 Service Commission rather than through the typical  
25 process of protracted hearings. I am pleased to

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1 report that as a result of what truly may be  
2 characterized as a "watershed" agreement with the PSC,  
3 the State Consumer Protection Board, the New York  
4 Attorney General, and a group of our major industrial  
5 customers, my optimism is even greater today. Apart  
6 from providing the company with financial breathing  
7 room while we endeavor to fashion a three year rate  
8 plan, the agreement represents a commitment by each of  
9 the signatories to end an era of confrontation and to  
10 restore the financial wellbeing of the company.

11 The agreement consists of three basic  
12 components. First, as a result of commitments made  
13 both by the company and by the other signatories, the  
14 financial crisis that hung over the company the last  
15 time -- or this time last year largely has been  
16 abated.

17 Second, the agreement establishes a  
18 framework for the resolution by early in 1991 of all  
19 issues of any significant financial consequences  
20 currently pending before the PSC and does so without  
21 the need for extensive and adversarial proceedings.  
22 Under the procedure established by the agreement, the  
23 company, the PSC staff and other participants before  
24 the Commission have entered into a series of  
25 negotiations. Based upon the discussions which have

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1 thus far taken place, I am confident that negotiated  
2 resolutions will be achieved.

3 Third, the agreement provides for a self-  
4 assessment of our organizational efficiency and  
5 effectiveness, with the goal of achieving financial  
6 and operating improvements. This program, Pride,  
7 Action, Change and Effectiveness, we call PACE, is the  
8 most intensive self-examination of our management and  
9 operation ever conducted. As we have conducted this  
10 self-assessment, we have been careful that it did not  
11 impact on the safe operation of the units or interfere  
12 with the earliest possible restart of Unit 1 or the  
13 successful completion of the upcoming refueling of  
14 Unit 2. It builds on the self-assessment skills that  
15 we have developed through our ongoing assessment of  
16 the Nuclear Division and expands the self-assessment  
17 process throughout the company.

18 I view our agreement with the PSC as a  
19 milestone on the road to an improved relationship  
20 between ourselves and the Public Service Commission.  
21 That improved relationship is an important foundation  
22 for the future financial health of Niagara Mohawk.

23 MR. DONLON: Thank you, Jack.

24 In closing, I'd like to say that we've come  
25 a long way toward resolving our problems and we are

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1 now headed in the right direction. My job, and that  
2 of our management, is to assure that our nuclear  
3 program has the leadership, resources and commitment  
4 to achieve our goals of making our nuclear plants  
5 among the best.

6 I have to make the final corporate decision  
7 as to the readiness of Unit 1 to operate and I will  
8 request the NRC's concurrence for restart only when I  
9 am convinced that we are ready. I will use the  
10 resources of the Site Operations Review Committee, our  
11 Nuclear Oversight Committee, and our management team  
12 to help me make that decision. I have remained  
13 actively involved in the restart process and you can  
14 be assured, gentlemen, that I will act only after I  
15 satisfy myself fully as to our readiness.

16 Finally, I'd like to thank you again for the  
17 opportunity to make this presentation. I'd like to  
18 thank the NRC at all levels for cooperating with us in  
19 our efforts to resume Unit 1 operations.

20 Thank you, Mr. Chairman.

21 CHAIRMAN CARR: Thank you, Mr. Donlon.

22 Questions? Commissioner Remick?

23 COMMISSIONER REMICK: Yes.

24 The first question, just for clarification,  
25 Mr. Burkhardt, you mention in Unit 1 you have five

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1 shifts plus a relief crew. What's the distinction  
2 between a shift and a relief crew?

3 MR. BURKHARDT: Let me let Kim Dahlberg  
4 explain that one to you.

5 Kim?

6 MR. DAHLBERG: Kim Dahlberg, Unit 1 Station  
7 Superintendent, Nine Mile Point.

8 The difference is the relief crew is  
9 basically a day shift crew that fills in for vacations  
10 or for sicknesses or things that are planned or that  
11 we can take a person from that relief to fill in.

12 COMMISSIONER REMICK: Does that mean that  
13 basically your day shift is double staffed? I mean  
14 you have basically double the people? Is that what it  
15 amounts to?

16 MR. DAHLBERG: That's correct.

17 COMMISSIONER REMICK: Okay. But they are  
18 qualified?

19 MR. DAHLBERG: Oh, yes, sir.

20 COMMISSIONER REMICK: Yes. Okay.

21 Do you have an independent safety  
22 engineering group at Nine Mile?

23 MR. BURKHARDT: Yes, we do.

24 COMMISSIONER REMICK: You do?

25 MR. BURKHARDT: Yes, we do.



1 COMMISSIONER REMICK: Well, I realize that  
2 your Independent Assessment Group has somewhat  
3 different functions, yet I can imagine that there  
4 might be some overlap. What's the relationship, if  
5 any, between the ISEG and the independent  
6 assessment --

7 MR. BURKHARDT: When we set up the  
8 Independent Assessment Group, we saw that there needed  
9 to be good coordination and, in fact, part of our  
10 restart action plan required that.

11 Let me let Linda Zimmerman talk about the  
12 efforts that she's made to try to coordinate with  
13 Quality Assurance, Independent Assessment Group, our  
14 Site Operations Review Committee, our Safety Review  
15 and Audit Board, the whole thing.

16 Linda?

17 MS. ZIMMERMAN: Linda Zimmerman, Manager of  
18 the Independent Assessment Group.

19 One of our restart commitments was to  
20 integrate with all of the existing assessment groups.  
21 The mission of the Independent Assessment Group is to  
22 help the Nuclear Division become self-diagnosing and  
23 self-correcting. Basically we're using the standards  
24 of performance as our criteria and looking at a  
25 specific performance measurement.

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1           What we have done is met with each of the  
2 existing assessment groups and talked about areas of  
3 overlap, areas of gap and how we can coordinate in  
4 terms of working together on special assessments,  
5 sharing information, communicating so that we're not  
6 over assessing any one department. So, we have an  
7 integration plan so that we will not over tax any  
8 department.

9           COMMISSIONER REMICK: And you feel that  
10 that's working? You're not getting delays on  
11 decisions and things because of overlapping bodies?

12           MS. ZIMMERMAN: Well, right now we are  
13 really functioning doing follow-on assessments to the  
14 readiness for restart effort. Our steady state  
15 operation will begin as soon as power ascension  
16 concludes. Thus far we have not had a problem in  
17 terms of overlaps and I think that the colleagues that  
18 I'm working with are also members of the senior  
19 management team. We have a pretty good relationship  
20 in terms of working together and I think that we're  
21 trying to minimize the resources it will take to do an  
22 assessment. So, I don't anticipate any lack of  
23 collaboration among the assessment groups.

24           MR. BURKHARDT: The only overlap that we  
25 will have is that the Independent Assessment Group

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1 will be assessing the performance of QA and ISEG and  
2 so forth and see how they demonstrate the standards of  
3 performance. We're focusing in now on management  
4 effectiveness and the standards of performance.

5 I've said to Linda and her group that I want  
6 to have a transition as we move into the next year to  
7 be focusing in more and more on results as well. In  
8 other words, we've gotten people to learn the  
9 fundamentals now. We need to start taking a look at  
10 the scoreboard and do that as well. But the first  
11 thing we have to do is get the fundamentals right, get  
12 everybody wanting to do it right and so forth.

13 But I want to really stress the fact that  
14 the Independent Assessment Group is intended to be not  
15 taking the place of any assessments that are done by  
16 line management, as are the QA and anyone else. In  
17 other words, we require the line managers to do their  
18 own self-assessment and the independent assessment  
19 group monitors how well they do at it and then gives  
20 them feedback.

21 COMMISSIONER REMICK: Do you find that your  
22 ISEG group is a very dynamic group? If so, how do you  
23 maintain that dynamism?

24 MR. BURKHARDT: Well, I think we've gotten  
25 much more involved in root cause and trending.

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1 They've been involved a lot in that. I get their  
2 monthly reports. Perhaps Carl Terry, to whom they  
3 essentially report, can tell you a little bit more  
4 about how that's been working.

5 MR. TERRY: Good morning. Carl Terry. I'm  
6 Vice President Nuclear Engineering and Licensing and  
7 the ISEG group is within my organization.

8 One of the things that we're doing, as Mr.  
9 Burkhardt indicated, the group does have particularly  
10 good training in the root cause and evaluation area.  
11 They also have a great deal of experience either in  
12 technical or operational aspects.

13 So, what we've done is we have used that  
14 group in a pilot program for a champion concept, what  
15 we refer to as a way of keeping our issues flagged and  
16 visible through resolution. As you know, any issue as  
17 it moves through the organization tends to go from one  
18 group to another for action. Of course we want to  
19 maintain that and maintain that ownership of that  
20 problem through that process in that organization.

21 However, it's also important to develop a  
22 process that will ensure that individuals follow  
23 through on their issues and help us in terms of  
24 keeping those issues visible and flagged. The ISEG  
25 group is participating in a pilot effort in that

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1 regard.

2 Also, the pilot -- the process of root cause  
3 and evaluation, such as using Kepno Tregoe techniques,  
4 or HPES type methods, resolved in recommended  
5 corrective action. The ISEG people that are involved  
6 in that have an opportunity to develop those actions  
7 and participate in it as part of that process.

8 COMMISSIONER REMICK: Okay. Thank you.

9 In the training area, within the last year I  
10 read an NRC report, I don't remember which inspection,  
11 but it had about as damning comments on complete  
12 breakdown in communications between Operations and  
13 Training as I've ever seen. Now, you do indicate that  
14 you have implemented some teamwork training, but I  
15 don't know if you had teamwork training in existence  
16 before that. What assurance do you have and do we  
17 have that that problem has been solved because I think  
18 it's very fundamental --

19 MR. BURKHARDT: Yes.

20 COMMISSIONER REMICK: -- for people to be  
21 adequately trained, that your Operations group feels  
22 ownership of those training programs and they work as  
23 one. How can you assure yourself or have you assured  
24 yourself that that problem has been solved?

25 MR. BURKHARDT: Well, that was a problem

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1 that was a severe one back in 1988 and one that we had  
2 to resolve. We did have -- in fact when we had the  
3 special team inspection in early '89, we had an  
4 operator who was unprofessional and so forth. The way  
5 we have resolved that, as I mentioned in my talk, is  
6 that we've created these OTPACs, or operator training  
7 advisory program committees, and those are operators  
8 and operations management and trainers and training  
9 management. I've attended a number of those OTPAC  
10 meetings and there has been tremendous teamwork and  
11 follow through on making things work.

12 For instance, as we were preparing the Unit  
13 2 operators for their requal exam in April, we had a  
14 lot of exam questions to get validated so we could get  
15 the exam bank large enough so we could get it out to  
16 the operators. That whole process of how to work the  
17 overtime in to get the operators to validate questions  
18 as all worked at an OTPAC meeting with the head of  
19 OTPAC, who is an operator, assigning responsibilities  
20 for that and talking about that. And, of course, the  
21 operations management was there so that the line  
22 management is not subverted. But the coordination and  
23 the teamwork is right there. I think that the NRC  
24 staff, as they have been in, has seen great  
25 cooperation and teamwork between the -- and I would

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1 like to report that the particular individual who was  
2 unprofessional back in early March of 1989 was put out  
3 to pasture for about a year over in the training area,  
4 as a matter of fact, and has been totally retreaded,  
5 if you might say, and he's one of our best operators  
6 now and is on his way to becoming a shift supervisor.

7 COMMISSIONER REMICK: Do you intentionally  
8 try to rotate people from Operations to Training and  
9 vice versa?

10 MR. BURKHARDT: Yes. We had some difficulty  
11 with that when we first were there. We had severe  
12 under manning in Training, which was part of the  
13 reason why the training had degraded back between '86  
14 and '88.

15 For example, we had only 39 people assigned  
16 to Training for an authorized allowance of 52. We now  
17 have about 130 assigned, some of whom are contractors  
18 working off problems. We had insufficient salaries to  
19 attract operations people over at Training and so we  
20 did a complete salary review of all of Training and we  
21 now have a very effective shift supervisor who is over  
22 -- in charge of the operations training programs in  
23 Unit 2 and is largely responsible for having such  
24 great success in that Unit 2 regual effort.

25 In fact, perhaps Mark Peifer could mention

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1 that, about Jim Poindexter. We don't have as much of  
2 it yet as we'd like, but we're --

3 COMMISSIONER REMICK: I think Mr. Dahlberg  
4 wants to make a comment also afterwards.

5 MR. DAHLBERG: Yes, I did, Commissioner  
6 Remick. I want to add a little bit more to what Mr.  
7 Burkhardt was saying. I spend -- I schedule my time  
8 so that on Thursdays I participate in some kind of  
9 training activity, so I can watch my operators in the  
10 simulator or in the classroom or assess some of the  
11 programs that we have in place.

12 The other thing that we have in place now  
13 that we didn't have a year ago, I have a training  
14 coordinator that is a line manager and is an SRO  
15 person, assistant ops superintendent that is my  
16 training coordinator to coordinate the training  
17 activities, scheduling some of the operators into  
18 training, any problems that come up from that.

19 I also have an SSS, a station shift  
20 supervisor, that now is full-time over in Training, on  
21 loan, to oversee the evaluations in the simulator. As  
22 we get into our requal, NRC requal in July, I will  
23 also have another SRO. His main function will be sort  
24 of what Mark is going to be talking about with Mr.  
25 Poindexter.

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1 COMMISSIONER REMICK: Thank you.

2 MR. PEIFER: I'm Mark Peifer, Manager  
3 Nuclear Services, and have as one of my  
4 responsibilities the training area.

5 I don't think it's any secret that we're not  
6 the first utility to have had coordination problems  
7 between Training and Operations. One of the things we  
8 did when the position of the Unit 2 instructor  
9 responsible for Unit 2 training position came open is we  
10 went to other utilities and found out how they had  
11 solved the same problem. One of the things they had  
12 done is taken a responsible shift supervisor and even  
13 if you have to force them into the training area, to  
14 do that.

15 Now, we didn't have to force this particular  
16 individual because we had some pretty good cooperation  
17 from Mr. Willis and the Unit 2 station superintendent  
18 and the individual himself had, in fact, been in  
19 Training and was somewhat familiar with the operations  
20 over there. But agreed to come over on a two year--  
21 at least a one year loan basis and is fully  
22 functioning as the manager in that organization and we  
23 couldn't be more pleased with the results of not only  
24 him personally and ability to get along with the other  
25 instructors, but also that obvious coordination and

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1 rapport he has with the other operators.

2 COMMISSIONER REMICK: I hope you continue  
3 that.

4 MR. PEIFER: We wouldn't hesitate to do that  
5 in Unit 1 either.

6 MR. BURKHARDT: We just received, I think,  
7 the welcome deficiency that the operation  
8 superintendent was spending too much of his time over  
9 in Training. We'll try to keep it that way.

10 MR. WILLIS: Well, I'd just like to add a  
11 couple of comments to that as well. I think a  
12 principal ingredient to the condition of the training  
13 program in early 1988 when these comments were  
14 generated that you're speaking of stem from the fact  
15 that the ownership of training by line management had  
16 never really been established. Therefore, there was  
17 not a clear understanding of who was responsible for  
18 the training of people. It was kind of a split or  
19 maybe finger pointing between Training and Operations.

20 One of the things that we have done is  
21 clearly established that it is line management's  
22 responsibility, that they are the owners, they are  
23 responsible for the programs, that Training provides  
24 them a service, and that they are responsible to see  
25 that the training programs are adequate to monitor

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1 that they're administered properly and to feed back  
2 corrective action if required. I think if you ask  
3 anybody in the plant today, any first line supervisor  
4 on up, I think you'll get the answer that they clearly  
5 understand their responsibility for training. And I  
6 think that's one of the major turnarounds that we've  
7 had.

8 MR. BURKHARDT: You might want to mention  
9 that Training Advisory Board too, Jim.

10 MR. WILLIS: And we have -- to further  
11 cement that and to keep it visible, we have  
12 established a Training Advisory Board, of which I am  
13 the Chairman. The training superintendent, Mr.  
14 Peifer, is a member and all of the principal  
15 superintendents who have training programs. This is  
16 to set broad policy on training programs and to  
17 resolve conflicts, make decisions where required, and  
18 then each of the training programs, major training  
19 programs at the plant, have advisory committees. For  
20 example, Mr. Burkhardt talked about the operational  
21 training advisory committees. We also have them for  
22 maintenance, chemistry and health physics and our  
23 technical training programs. These are sub-boards of  
24 the Training Advisory Board.

25 COMMISSIONER REMICK: One more question--

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1 MR. WILLIS: So there's great emphasis  
2 there.

3 COMMISSIONER REMICK: Yes. Thank you.

4 One more question. Mr. Dahlberg mentioned  
5 that in the management area, supervisory training,  
6 management training, that you're making sure that  
7 people attend continuing training. But if I recall,  
8 one of the other comments in that inspection report  
9 was that there were a lot of people not attending  
10 continuing training. How about other areas other than  
11 management? How are you assuring that your people in  
12 any one of the positions is attending these scheduled  
13 continuing training programs?

14 MR. BURKHARDT: We've really increased the  
15 control and the discipline of that and particularly in  
16 the maintenance area. We were not getting the kind of  
17 attendance at maintenance training because the people  
18 were not available frequently to go. So, we have  
19 changed our way of scheduling that. We now schedule  
20 each lesson twice and we require that everyone go.  
21 That was one of the deficiencies that we had back--  
22 that we were resolving back in the '88 time frame that  
23 caused us to have a very large self-evaluation report  
24 for our accreditation. We had the largest one they'd  
25 ever seen because we have a new culture there of

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1 saying what we're doing wrong. And so we have really  
2 pushed that one hard and this year we have very high  
3 attendance at those training programs.

4 Mark, you might want to just mention what it  
5 is.

6 MR. PEIFER: That whole area has gotten a  
7 lot of emphasis, as you can imagine, because the  
8 training can only be effective if the people show up  
9 for it. Not only in the operator area, but we also  
10 had that same problem elsewhere, especially in the  
11 tech staff area and we have seen a gradual increase  
12 now as the emphasis on that has been placed, the right  
13 standards are set, the standards from Mr. Willis as  
14 station general order, that basically he says there's  
15 nothing more important than training except nuclear  
16 safety, and there's no excuse for people not showing  
17 up. So, we provide a monthly report to the line  
18 management over in the staff on who was scheduled, who  
19 did not show up, and then, of course, provide enough  
20 classes for them to show up to get it remediated so  
21 they get back in there.

22 But that whole area is getting a lot of  
23 emphasis and we believe we've got that pretty well  
24 fixed. We're up now to about -- I believe around the  
25 80 percent attendance area in the tech staff area

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1 which is one of our weakest areas and was identified  
2 by INPO.

3 COMMISSIONER REMICK: Good. Thank you very  
4 much.

5 Thank you, Mr. Chairman.

6 CHAIRMAN CARR: Commissioner Rogers?

7 COMMISSIONER ROGERS: Yes. I wonder if you  
8 could say a little bit about how your quality  
9 assurance and independent assessment activities relate  
10 to each other. You touched on that a little bit. The  
11 independent assessment, I take it, is on site and the  
12 quality assurance is in Syracuse. Is that right?

13 MR. BURKHARDT: No, that's not really true.  
14 Independent assessment really is at the Salina Meadows  
15 complex with a group -- a portion of their group is  
16 on-site. Quality Assurance has a very large  
17 contingent on-site, but the headquarters, where Jim  
18 Perry, the Vice President is, is downtown.

19 COMMISSIONER ROGERS: I see.

20 MR. BURKHARDT: Why don't we ask Jim Perry  
21 to just say a few words about how that fits together?  
22 He's our Vice President of Quality Assurance.

23 MR. PERRY: Yes, sir. I'm Jim Perry, Vice  
24 President of Quality Assurance. I'm pleased to report  
25 that the Quality Assurance organization is rather

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1 large. We have about 130 people working in Nuclear  
2 and most of those people are physically located at  
3 Nine Mile Point.

4 For example, all of the personnel who are  
5 engaged 100 percent in auditing are physically located  
6 on-site. All of the personnel who perform routine and  
7 special surveillances continuously are all located on-  
8 site. So, the people that are downtown in Salina  
9 Meadows are the personnel who support the Nuclear  
10 Engineering type activities and a small staff that's  
11 involved in training and procedures.

12 COMMISSIONER ROGERS: Thank you.

13 Well, I assumed that it had to be something  
14 like that, that you couldn't be in such a total  
15 disconnect that way with --

16 MR. BURKHARDT: Independent Assessment Group  
17 certainly does not have the quality assurance function  
18 at all.

19 COMMISSIONER ROGERS: Yes. Well, just how  
20 they will fit together.

21 Tell me about your systems engineers. Where  
22 are they located in the organization?

23 MR. BURKHARDT: Okay. I'll let Jim Willis  
24 talk about that. They're in the Generation wing of  
25 the thing. Now, we also have site engineering, which

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1 is -- which works for Carl Terry.

2 COMMISSIONER ROGERS: Right.

3 MR. WILLIS: In the technical organization  
4 which reports to a technical superintendent, there is  
5 a system engineer group which has -- we've really been  
6 building this group over the last couple of years. We  
7 have a new function that was added in 1988. We have  
8 about 50 engineers who are split between the two units  
9 with the function of providing technical oversight for  
10 the assigned systems which include reviewing the  
11 operation, the physical condition, overseeing any  
12 modification requests that would be required for the  
13 system and providing a liaison between the plant staff  
14 and the engineering forces who do the actual design  
15 and maintain the design database for the plant.

16 This function is really just beginning to go  
17 on a rather steep ramp now of effectiveness. We're  
18 seeing that people now are prone to call the system  
19 engineer first when they've got a problem in the  
20 plant, which is exactly the kind of condition we were  
21 trying to get to where they had the confidence and  
22 the -- would be relied on by the other members of the  
23 plant staff as being a good focal point. So, it's  
24 working very well.

25 MR. BURKHARDT: He or she is becoming the



1 owner of the system, what we used to call in the Navy  
2 the assistant petty officer, the real expert.

3 COMMISSIONER ROGERS: Yes.

4 MR. BURKHARDT: Root cause, problem solving,  
5 those sort of things, they are the continuity.

6 COMMISSIONER ROGERS: So you have 25 per  
7 unit and each one would have roughly how many systems  
8 to look after? I know it's --

9 MR. WILLIS: It would vary, probably --

10 COMMISSIONER ROGERS: -- there's a variation  
11 there.

12 MR. WILLIS: -- three of so systems in Unit  
13 1, and maybe four or five in Unit 2.

14 COMMISSIONER ROGERS: Where do you stand on  
15 a long-term solution of the BWR stability issue?  
16 There were three proposed solutions by the owners  
17 group, BWR owners group. Have you selected one of  
18 those three solutions to staying out of trouble with  
19 respect to the La Salle oscillations type of  
20 situation?

21 MR. WILLIS: We have modified our operating  
22 procedures such that we take all effort to stay out of  
23 that area and --

24 COMMISSIONER ROGERS: Is that a regional  
25 exclusion method? Is that essentially what you're

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1 talking about?

2 MR. WILLIS: That's essentially what we're  
3 doing. When you get in that region, you either take  
4 prompt action to get out or you scram.

5 COMMISSIONER ROGERS: Okay. So it's  
6 basically regional exclusion?

7 MR. WILLIS: Yes.

8 COMMISSIONER ROGERS: Your shifts, have they  
9 received additional simulator training in emergency  
10 operating procedures? Have they all --

11 MR. BURKHARDT: Yes.

12 MR. WILLIS: They have received extensive  
13 additional training in emergency operating procedures.

14 MR. BURKHARDT: It was one of the issues in  
15 the restart effort, and so they've had a lot of review  
16 by us and by the NRC.

17 COMMISSIONER ROGERS: Your shift technical  
18 advisors, are they licensed? Are some of them  
19 licensed as ROs or SROs?

20 MR. WILLIS: Right now, our shift technical  
21 advisors serve the dual function of assistant shift  
22 supervisor, and they are all licensed. We have just  
23 recently authorized additional positions and plan to  
24 split out the STA function and the ASS function.

25 MR. BURKHARDT: Which we did in Unit 2.

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1 MR. WILLIS: Yes. And initially, the STAs  
2 will not be licensed with this new group. In order to  
3 split the function out quickly as we can, we were just  
4 training the STAs in the STA function. They will all  
5 have degrees, engineering degrees. And then  
6 eventually we plan to license the STAs as well, but  
7 currently the STAs are licensed.

8 COMMISSIONER ROGERS: All right. That's all  
9 for me, thank you.

10 CHAIRMAN CARR: Commissioner Curtiss?

11 COMMISSIONER CURTISS: I guess I have a  
12 handful of questions and comments. Let me begin with  
13 the SALP report, because I was somewhat puzzled by  
14 your reading of that as a turning point. I must say I  
15 find myself in somewhat mild disagreement with that.

16 MR. BURKHARDT: It has those words in there.

17 COMMISSIONER CURTISS: I see it says you've  
18 reached a turning point for assuring quality.

19 MR. BURKHARDT: Yes.

20 COMMISSIONER CURTISS: And I must say, I  
21 just read the report last night carefully --

22 MR. BURKHARDT: That's what I was referring  
23 to.

24 COMMISSIONER CURTISS: -- and again this  
25 morning.

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1           As I look at the report, it seemed, looking  
2 strictly at the grades first --

3           MR. BURKHARDT: We try not to look at the  
4 grades.

5           COMMISSIONER CURTISS: -- it seems to  
6 describe -- well, they're supposed to be reflective of  
7 what's in the report if we're doing our job correctly.

8           MR. BURKHARDT: They are, that's right.

9           COMMISSIONER CURTISS: Not just the grades--  
10

11          MR. BURKHARDT: Yes.

12          COMMISSIONER CURTISS: -- but the body of  
13 the report. It seems to reflect sort of continuing  
14 along the same basic lines that you were at in the  
15 last SALP review.

16          MR. BURKHARDT: Yes. Let me comment on  
17 that.

18          COMMISSIONER CURTISS: Am I missing  
19 something, or are you reading between the lines?

20          MR. BURKHARDT: First off, you know, they  
21 don't give us much credit for promises and good  
22 intentions. And we don't have Unit 1 started up yet,  
23 so I think that I would have to be concerned about  
24 them if they gave us higher than a 3 rating in  
25 operations of Unit 1, because we haven't got it

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1 operating yet.

2 We had sort of a rocky road with Unit 2, and  
3 then we did quite well. We operated for a while, not  
4 that operating for a long period of time is good, but  
5 we operated for 135 days last summer. Then we had a  
6 two week scheduled outage which we completed on time.  
7 Then at that time, we were remediating the operators  
8 who had had problems, as you recall, with that  
9 examination and we were sort of giving them a double  
10 dose and we pushed a little hard on them. And we had  
11 some material problems. We had some design problems  
12 with our feed pumps.

13 And we had a spotty operations record from  
14 about October through January of last -- October  
15 through December of last year and January of this  
16 year. And I was very disappointed in how that went.  
17 We did a little reorganizing to strengthen management  
18 of that effort, and I think that if you talk to the  
19 NRC staff they will say that that was sort of it.

20 Now we got our feed pump problems squared  
21 away. We got started up on the 7th of February. The  
22 plant has operated well since that time. How we  
23 handled the feed problem, they evaluated as being  
24 good. They indicated, as I mentioned in my comments,  
25 that they were seeing improvements toward the later

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1 part of the SALP period but weren't ready to really  
2 put them in there.

3 As you look through the things there, you'll  
4 see a balance. It looks like they're getting better,  
5 but unfortunately they're still doing this. You'll  
6 find the system at area walk down, which occurred last  
7 August that I mentioned in here as was a deficiency on  
8 the IATI, appears in about four places in there to say  
9 how we haven't gotten all well yet. And so, they beat  
10 us up pretty bad about that one, and rightly so. And  
11 we've learned a pretty good lesson over that one.

12 I would say we were pleased, as I said, that  
13 the engineering one came up to it too. I think that  
14 was well deserved. I think probably had we operated  
15 except for those four months with Unit 2, we would  
16 have probably seen a higher grade in Unit 2 operations  
17 and perhaps the maintenance.

18 They thought the surveillance came up very  
19 well, if you look at that. Of course, we're still a 1  
20 in security and emergency planning. They're the ones  
21 that gave me the grade. I don't want to quibble with  
22 the grades. I'm trying to fix whatever the concerns  
23 are there.

24 What they did say last week was that in the  
25 area of operations, maintenance, and assurance of

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1 quality, last week they were most impressed at how  
2 much we'd improved in that area.

3 COMMISSIONER CURTISS: Okay. I do  
4 appreciate that this only represents a limited look  
5 during a set period of time.

6 MR. BURKHARDT: Right.

7 COMMISSIONER CURTISS: Through February,  
8 which is four or five months ago. And I will pursue  
9 with them what their recent views are on the --

10 MR. BURKHARDT: That's the first look. We  
11 haven't discussed it with them. There are a few  
12 numbers in there that we would quibble with and so  
13 forth, but --

14 COMMISSIONER CURTISS: Let me pick up on one  
15 --

16 MR. BURKHARDT: -- the main thing is I think  
17 we're attacking all the concerns that are in there.

18 COMMISSIONER CURTISS: Okay. Let me pick up  
19 on one item in here that you raised in your comments  
20 in particular, the question of maintenance staffing  
21 levels.

22 MR. BURKHARDT: Yes.

23 COMMISSIONER CURTISS: In the report, I  
24 think the term that's used is that the maintenance  
25 staffing levels at Unit 2 in particular are marginally

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1 acceptable. You've indicated you've taken a look at  
2 that across the industry --

3 MR. BURKHARDT: Yes.

4 COMMISSIONER CURTISS: -- in terms of  
5 averages.

6 MR. BURKHARDT: Yes.

7 COMMISSIONER CURTISS: Is that a common--

8 MR. BURKHARDT: I think what our concern is--  
9 -

10 COMMISSIONER CURTISS: Do you disagree?

11 MR. BURKHARDT: -- and I think that they saw  
12 it last week, is that while we have people now wanting  
13 to do things right, we still don't have them really  
14 proficient in coordinating maintenance. And so the  
15 maintenance work off rate is not as great as we'd like  
16 to see it, but I don't think it's a staffing problem.

17 COMMISSIONER CURTISS: You've got enough  
18 people to do it?

19 MR. BURKHARDT: I think it's a coordination  
20 problem. Now we've got the managers and supervisors  
21 are out there. They saw them last week. They're out  
22 there all the time. But we're still learning to get  
23 the team running at full speed.

24 COMMISSIONER CURTISS: Okay.

25 MR. BURKHARDT: But we don't want to run so

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1 fast that we do it wrong, and so therefore we -- we  
2 had some problems with procedures. We have good  
3 procedural adherence now. But as you know, when you  
4 start to get good procedural adherence you do it  
5 slowly, because you find a lot of problems with the  
6 procedures. And so that's taken us time. But I don't  
7 think the numbers of people that we have are a  
8 concern.

9 COMMISSIONER CURTISS: Okay.

10 MR. BURKHARDT: As I said, we compared with  
11 70 other plants and we are well up and we are pretty  
12 much fully-manned. I mean, 15 people out of that  
13 number is a very small vacancy rate.

14 COMMISSIONER CURTISS: Let me go through  
15 just a handful of loose ends here. At the last  
16 meeting, you indicated you were putting a third SRO on  
17 the shift. Is that continuing?

18 MR. BURKHARDT: We did that with Unit 2.

19 MR. WILLIS: That's part of the plan that  
20 we're talking --

21 COMMISSIONER CURTISS: So you'll have a  
22 third SRO on both --

23 MR. BURKHARDT: That will be the STA and the  
24 ASSS and the SSS.

25 COMMISSIONER CURTISS: All right. On the

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1 training of your shifts, are you still breaking them  
2 up when you're training them?

3 MR. BURKHARDT: No.

4 COMMISSIONER CURTISS: You're now training  
5 them as shifts?

6 MR. BURKHARDT: They're doing much better.

7 COMMISSIONER CURTISS: Good to hear that.

8 Could you say a word or two on the status of  
9 the Rad Waste Building clean-up?

10 MR. BURKHARDT: Yes. I thought you'd  
11 probably ask that and I saved that. We're doing well  
12 with that. We've had some things that needed to get  
13 refined with regard to our robot. We call him TROD,  
14 Tethered Remote Operating Device. He's the one who  
15 picks up the drums and empties them out and so forth.  
16 We've gotten five drums removed and a couple of them,  
17 two or three of them, are decontaminated down to where  
18 they're only 10 or 20 millirems on contact.

19 This is TROD, in case you'd like to meet  
20 him. I know we have in our paper our President  
21 shaking hands with him.

22 We've cleaned up now the operator isle.  
23 We've got a portion of the filling isle cleaned up.  
24 We've got both of the end isles that are fairly well  
25 cleaned up. We found that the wheels for TROD were a

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1 little large for the track down there and they've been  
2 modified. I think they're just about coming back.  
3 These Xs sort of show what's been cleaned and what  
4 hasn't been cleaned. And we're on track to complete  
5 this effort by late summer.

6 COMMISSIONER CURTISS: Summer of this year?

7 MR. BURKHARDT: We're doing it carefully.  
8 What we've done so far, we had estimated about 30  
9 manrems for it. It only took us about 10, 10.752 to  
10 be exact. So we're emphasizing doing it carefully,  
11 doing it well. The people are becoming pretty  
12 proficient at using TROD.

13 For those of you who would like to see it,  
14 this is the console they use. It has sort of a mimic  
15 arm that they follow with it, and they can do that.  
16 Now this is not down in the 225 foot level, but that's  
17 really at the thing.

18 The drum number 1 is now 10 millirems on  
19 contact. Number 2 is 100. Number 3 is 10. And the  
20 others are being decontaminated. We've collected 200  
21 cubic feet of waste thus far, and our levels are not  
22 bad at all in the areas that we've decontaminated.  
23 But we have certainly some areas that are still fairly  
24 high in level where we haven't decontaminated.

25 COMMISSIONER CURTISS: And you'll have that

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1 done sometime later this summer?

2 MR. BURKHARDT: We expect the whole thing  
3 will take us about 42 manrem to do.

4 COMMISSIONER CURTISS: All right.

5 A couple other quick questions. On the  
6 torus wall thinning issue, you indicated that you'll  
7 do extensive monitoring on that every six months --

8 MR. BURKHARDT: Every six months.

9 COMMISSIONER CURTISS: -- through the next  
10 cycle.

11 MR. BURKHARDT: Yes.

12 COMMISSIONER CURTISS: How extensive is the  
13 monitoring that you're actually doing?

14 MR. BURKHARDT: It's very extensive, because  
15 you know the accuracy of the testing is less than the  
16 corrosion rate, so you have to get a very high sample  
17 in order to be able to average out what you have. So  
18 it's very extensive and we are seeing that the  
19 corrosion rate is really not as accelerated as it  
20 appeared to be, but we clearly will have -- and we  
21 probably could go to the next but one refueling  
22 outage, but we're making our plans to --

23 COMMISSIONER CURTISS: Okay.

24 MR. BURKHARDT: Now this is not a problem  
25 with integrity of the thing --

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1 COMMISSIONER CURTISS: I understand.

2 MR. BURKHARDT: -- but rather, the strength  
3 of it if you had the loads on it during an accident.

4 COMMISSIONER CURTISS: Right.

5 MR. BURKHARDT: And so, that's why we're  
6 going to put these stiffening bands on it.

7 Carl, do you want to add anything to that?

8 COMMISSIONER ROGERS: While you're on it,  
9 could you say what those stiffening rings are, just  
10 describe them very briefly?

11 MR. BURKHARDT: Yes.

12 Why don't you do that, Carl?

13 We're still not exactly settled on the way  
14 we're going to -- we talked about mid-bay saddles and  
15 then we talked about the stiffening rings. We've  
16 looked at corrosion inhibitors and so forth.

17 MR. TERRY: Yes. Essentially, the  
18 stiffening rings are placed in the center span between  
19 each of the supports for the torus. They would go  
20 around the circumference of the torus and essentially  
21 provide support for that section. The weakest points  
22 in the torus are mid-bay at the lower part of the--  
23 at the bottom, rather, of the torus, and that is where  
24 we take our measurements in terms of wall thickness,  
25 such that we make sure and monitor those areas the

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1 closest.

2 COMMISSIONER CURTISS: Okay. One other  
3 question for Mr. Endries. On the financial issues,  
4 you talked a little bit about the rate case. If I  
5 understood what you said, you've reached an agreement  
6 to sit down and talk. You haven't settled that yet?  
7 Is that correct?

8 MR. ENDRIES: That's correct. It hasn't  
9 been settled. We are having negotiations on various  
10 regulatory issues, including the rate case, and we  
11 expect that to reach a conclusion late this year or  
12 the very early part of next year.

13 COMMISSIONER CURTISS: Okay. At the August  
14 meeting of last year, you talked about two additional  
15 issues that you described as important to the  
16 company's financial health, the pension fund  
17 settlement issue and the recovery of replacement power  
18 costs. Are those all part of the same negotiations,  
19 or --

20 MR. ENDRIES: Well, the -- one of them is,  
21 the replacement power cost. But the way that worked  
22 out last summer was that we were permitted to resume  
23 billing replacement power cost. That improved our  
24 cash flow.

25 The pension gain was not specifically used

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1 to improve our financial position, but instead of that  
2 we moved to a system of cost deferrals related to  
3 certain coverage ratios, financial coverage ratios  
4 which underlie credit ratings. So we have had some  
5 cost deferrals that will be included as part of the  
6 rate settlements that come the end of this year.

7 COMMISSIONER CURTISS: Okay. That's all I  
8 have.

9 CHAIRMAN CARR: I gathered that you answered  
10 my question on maintenance, because it was asked by  
11 Commissioner Curtiss, I believe. But that SALP report  
12 did identify indications of staffing shortages in  
13 engineering licensed operators as well, and I kind of  
14 interpreted from your STA reassignment you're using  
15 that as a means to get more licensed operators while  
16 you bring in STAs.

17 MR. BURKHARDT: Right. What we've done is  
18 we've -- I added in about 20 positions on each unit to  
19 prime the pump on training operators, and we've been  
20 out recruiting operators to bring them in so that we  
21 can get -- it's not that we don't have enough licensed  
22 operators to man the shifts. It's just that we don't  
23 have enough to create that rotation that we want to  
24 create.

25 CHAIRMAN CARR: Is your ultimate goal six

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1 shifts?

2 MR. BURKHARDT: Right now, Kim Dahlberg is  
3 not yet sure that he wants to go to six shifts. But  
4 because, as I said, with Unit 1 we don't have nearly  
5 the surveillance load and so forth during the day that  
6 we have with the other one. But probably we'll get  
7 there.

8 I don't want to -- what I would really like  
9 to do it to see a lot more operators out in quality  
10 assurance and in training and in work center  
11 supervisor and that kind of stuff and get a little  
12 more of that rotation going.

13 CHAIRMAN CARR: How about the indication of  
14 shortages in engineering? How are you addressing  
15 that? Or do you agree with it?

16 MR. BURKHARDT: I don't think it's a numbers  
17 shortage there. I think that -- and I don't want to  
18 speak for the NRC, but I think that they -- in our  
19 discussions, there's been really more concern about  
20 the depth of the talent that we have. Our engineering  
21 training programs were lying fallow for some period of  
22 time and we're getting them started up and so forth.

23 While we have good sharp people, we don't  
24 have as many as we'd like to have. There still is too  
25 much dependence on contractors, A/E and so forth, and

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1 we're weaning away from that. For instance, last  
2 summer when we spoke we had about 1,100 contractors  
3 there and we had about a little over 2,000 employees.  
4 We now have about 2,200 employees and 800 contractors,  
5 and so we're moving in that direction.

6 But I don't believe that we're in a  
7 situation of under-manning. We did have shortages of  
8 certain areas like outage management and system  
9 engineers, which were new things, and that's the  
10 reason we didn't have them. And we've made great  
11 progress in recruiting good people for that.

12 And I was amazed in one of my MBWA sessions  
13 when I met with the system engineers and we hardly had  
14 a room large enough to have them in over at the  
15 training center because we had so many. So we've come  
16 a long way in that area. But as far as not enough  
17 troops, we don't have that situation. We really  
18 don't. Now we've got a lot of work to do getting Unit  
19 1 on-line, so we of course use contractors where  
20 necessary.

21 CHAIRMAN CARR: In looking over the SALP, it  
22 looked like about half the reactor trips on Unit 2 and  
23 about half the LERs on both units were attributable to  
24 personnel error.

25 MR. BURKHARDT: Yes.

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1 CHAIRMAN CARR: What steps are you taking to  
2 address that, and have you had any success at it?

3 MR. BURKHARDT: I think we've had some  
4 success. Part of the problem in the -- we were doing  
5 even better with Unit 2, until we got into the fall.  
6 I think we pushed -- we had the operators pretty  
7 tired, because we had them working a lot of overtime  
8 in order to get the people remediated who hadn't  
9 passed their requal exam.

10 But we found that with still having a lot of  
11 design problems to overcome with Unit 2, not having  
12 got to the first refueling outage to resolve a lot of  
13 those things, and we had too many lit annunciators.  
14 We've got an aggressive program to get that out of the  
15 way during the first refueling outage. We just -- we  
16 didn't have enough management oversight of what was  
17 going on.

18 So what we did was we took a very strong  
19 manager who has a very strong operator background and  
20 we put him in as the operations superintendent and  
21 moved the operations superintendent to be the deputy  
22 plant manager, we call him, the deputy station  
23 superintendent. And with that group now we've been  
24 able to walk both sides of the street, watch the  
25 operators closely and also manage the maintenance and

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1 the modification preparations to get rid of the other  
2 problems that we have there.

3 So part of the problem has been that it has  
4 been a difficult environment for the operators in Unit  
5 2, because the plant has not shaken down yet as well  
6 as it should be.

7 And the other part of it is that we didn't  
8 have the kind of standards that we needed to have with  
9 regard to personnel error, and we've been tightening  
10 that up. And the operators really, I think, have  
11 become more and more impressive and, you know, as far  
12 as the requal exam they just maxed it out. They did  
13 very well with it. So we've had even considerably  
14 less operator error since the first of the year, since  
15 we made those changes.

16 CHAIRMAN CARR: Well, gentlemen, I thank  
17 you. We appreciate your time. I'm sorry we kept you  
18 so long, but as you can tell the Commission's kind of  
19 concerned about this, so we wanted to be sure you got  
20 your whole pitch in.

21 So we'll excuse you and ask for the staff to  
22 come forward please.

23 Mr. Taylor, you may proceed.

24 MR. TAYLOR: Good morning.

25 With me at the table today are Tom Murley,

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1 Director of NRR; and Robert Martin, who is the Project  
2 Manager for Nine Mile; to my right, Tim Martin, our  
3 Regional Administrator, Region I; and Bill Cook, who  
4 is the Senior Resident, Nine Mile.

5 As you heard previously, NRC staff completed  
6 a Readiness Assessment Team inspection just this past  
7 week. And to be sure that the NRC senior management  
8 understood the level of improvement at Nine Mile, both  
9 Tom Murley and Tim Martin were at the site as this  
10 inspection was concluded.

11 With that, I'll introduce Tom Murley, who  
12 has some comments.

13 DOCTOR MURLEY: Thank you.

14 Mr. Chairman, the status of Nine Mile Point  
15 has been discussed with the Commission on several  
16 previous occasions. A status briefing was held last  
17 August with the Commission. And as you know, Nine  
18 Mile Point 1 has been discussed following each of the  
19 senior management meetings since June of 1988.

20 Tim Martin and I visited the site last week,  
21 as Jim said, to tour both units and to talk in some  
22 detail with the Readiness Assessment Team that was on  
23 site last week. I personally wanted to get a first-  
24 hand look at the operations, especially in light of  
25 the problems that were outlined in the SALP report.

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1 And Tim attended the exit meeting with Niagara Mohawk  
2 on Friday and he'll talk about the details in a  
3 minute.

4 The team had found many improvements in the  
5 overall management and conduct of operations at Nine  
6 Mile Point 1 since the integrated assessment team  
7 inspection last October and since the period covered  
8 by the latest SALP report. From our own observations  
9 and discussions, I would mention three areas in  
10 particular where we saw improvements.

11 The first is safety attitudes among the  
12 plant staff, especially with regard to the need to  
13 have procedures and to follow the procedures. Tim and  
14 I and Bill Cook and the staff that went with us talked  
15 with several of the plant staff, including one of the  
16 shift supervisors who was on duty at the time.

17 The second area seems to be better teamwork  
18 among the plant organizations.

19 And a third area is better planning of work  
20 activities at the site.

21 In our own past briefings of the Commission,  
22 we have reported our views that the licensee's  
23 progress was quite slow, both in developing a restart  
24 plan and in implementing the corrective actions in  
25 that plan. I should say that that pattern is similar

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1 to the pattern we've seen in other plants that are on  
2 our watch list or have been on our watch list in  
3 recent years. That is the pattern of a company being  
4 slow to recognize the scope and the depth of their  
5 problems, being slow to put effective corrective actions in  
6 place. And then once that happens, which sometimes  
7 can take a year or two or even longer, the  
8 implementation of corrective action shows quite slow  
9 progress at first. But then once the team is in place  
10 and the attitudes are positive, then we start to see  
11 improvement pick up fairly quickly.

12 Insofar as the team and Tim and I were able  
13 to tell, that looks to be the status that they're in  
14 now is a fairly rapid improvement phase. Niagara  
15 Mohawk still has a number of plant hardware  
16 improvements that they're making, and there's some  
17 final testing to be done at Unit 1.

18 At this time, though, the staff believes  
19 that Nine Mile Point Unit 1 can safely proceed with  
20 restart when the Regional Administrator determines  
21 that the plant and the staff at the site are ready.  
22 Niagara Mohawk management will have to continue its  
23 close oversight of activities at the site to ensure  
24 that these improving trends continue, I would guess at  
25 least for another year or two of close management

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1 attention by Niagara Mohawk. In addition, the NRC  
2 staff itself will have to continue to monitor their  
3 performance very closely during the start-up phase.

4 Tim Martin is now going to talk in more  
5 details about licensee's performance.

6 MR. MARTIN: Gentlemen, you were last given  
7 a full status briefing on Nine Mile Point in August,  
8 1989.

9 (Slide) In my first slide, I have outlined  
10 significant activities that preceded that meeting.  
11 Those activities clarified the issues to be resolved  
12 prior to plant restart.

13 Unless you have questions, I intend to move  
14 on.

15 Subsequent to that briefing, the NRC was  
16 informed that the Rad Waste Processing Building  
17 subbasement had been flooded in 1981, overturning  
18 drums of spent resin and producing significant  
19 contamination that had not been cleaned up.

20 The NRC dispatched an augmented inspection  
21 team who concluded that the licensee had intentionally  
22 flooded the subbasement without performing the  
23 necessary reviews to determine the acceptability of  
24 the action. Subsequent clean-up efforts were  
25 suspended when the magnitude of the task was

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1 recognized. Recent licensee actions have demonstrated  
2 good management oversight and a cautious reasonable  
3 approach to clean-up of the area.

4 In September, 1989, the licensee submitted  
5 their restart readiness report. The staff approved  
6 revision 2 of the licensee's restart action plan  
7 during the later part of that month, based on NRC  
8 inspection results in consideration of comments  
9 received from the public during a meeting in the area  
10 of the plant.

11 As follow-up to the licensee's restart  
12 readiness report, the NRC conducted an integrated  
13 assessment team inspection in October, 1989. The IATI  
14 noted clear improvement in licensee planning and goal  
15 setting, organizational culture, planning and  
16 teamwork. However, performance in problem solving and  
17 standards of performance in self-assessment were  
18 determined to be weak with limited improvement. The  
19 team did not identify any fundamental flaws in the  
20 restart action plan or new technical issues that would  
21 affect restart.

22 During the fall and winter, we observed a  
23 series of operations and maintenance department  
24 personnel errors. New practices were being  
25 established. Some members of the staff were

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1 performing new roles. New and revised procedures were  
2 being implemented. The efforts devoted to operator  
3 training were extensive. The maintenance backlog was  
4 challenging. And the organization appeared to be  
5 engaged in too many activities at once.

6 Individually, the errors were not  
7 particularly significant, and the specific corrective  
8 actions for each were acceptable. However, we were  
9 disappointed in the untimely recognition and  
10 resolution of the underlying problem.

11 During recent months, resident and region-  
12 based inspectors have noted a significant reduction in  
13 personnel errors and continued progress in completion  
14 of task and implementation of plans to support Unit 1  
15 restart. Operational performance at Unit 2 has shown  
16 marked improvement with no scrams from power and no  
17 significant events. Unit 1 preparation for and reload  
18 of fuel is generally well done. The maintenance  
19 backlog has been reduced and inspected activities have  
20 demonstrated improvement in staff attitude,  
21 maintenance process, oversight and performance,  
22 particularly since implementation of revised work  
23 control practices earlier this year.

24 In March of this year, we learned that the  
25 INPO National Accreditation Board had placed some of

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1 the licensee's training programs on probation. You've  
2 already heard that discussion and I won't go into it  
3 further.

4 Two weeks ago, we conducted a second round  
5 requalification exam for Unit 2 licensed operators.  
6 All 15 candidates in three crews passed, demonstrating  
7 substantially improved performance in all areas of  
8 previous concern. Further, five of the nine licensee-  
9 identified requalification program action plan issues  
10 were determined to be resolved with substantial  
11 progress and near-term completion on the remaining  
12 four issues.

13 Last week, we conducted a restart readiness  
14 team inspection, and the results demonstrated that the  
15 licensee had made substantial improvement in  
16 organizational standards, attitudes, and performance.  
17 To avoid repeating myself, I'll hold further comment  
18 until later.

19 (Slide) The next slide summarizes the staff  
20 assessment of licensee performance over the last two  
21 SALP cycles, a period of transition for the licensee  
22 where we and they were defining the problems which  
23 needed to be corrected. The restart action plan was  
24 not approved by the NRC until the middle of the last  
25 cycle, and many of the licensee's initiatives were not

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1 fully in place throughout that cycle. The last SALP  
2 report was provided to you and the licensee last week,  
3 so I'll be brief in my comments.

4 In the area of operations, performance was  
5 mixed. Substantial progress was made by the end of  
6 the period in improved training, operator attitude,  
7 communication of expectations, and teamwork. Although  
8 examples of personnel error were high near the end of  
9 the period and several examples of inadequate  
10 corrective action and self-assessment were identified,  
11 we believe that with improved management oversight of  
12 day to day operations, operational performance will  
13 continue to improve.

14 In the area of radiologic controls,  
15 performance remained good.

16 In the area of maintenance and surveillance,  
17 performance remained weak in maintenance but  
18 significantly improved in surveillance. Although the  
19 quality of maintenance procedures was improved, the  
20 work better prioritized, and the backlog of Unit 1  
21 work requests reduced, the number of maintenance-  
22 related events and problems demonstrated that the  
23 maintenance program performance needed substantial  
24 improvement. Since then, we have improved improvement  
25 in the reduction of maintenance personnel errors.

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1           In both the areas of emergency preparedness  
2           and security, the licensee continued to maintain high  
3           standards and effective programs.

4           In the area of engineering and tech support,  
5           overall performance substantially improved. In  
6           particular, improvements were noted in management  
7           oversight, resource commitment, site support, control  
8           of contractors, activity prioritization, and general  
9           quality of engineering work. Although some problems  
10          were noted, particularly in those instances where  
11          management involvement was limited, we conclude that  
12          the performance had sufficiently improved to warrant a  
13          category 2 rating.

14          In the area of safety assessment quality  
15          verification -- despite expenditure of significant  
16          effort to change attitude, communicate expectations,  
17          improve oversight and enhance self-assessment and  
18          problem solving capabilities -- only limited progress  
19          was demonstrated in producing consistent good results.  
20          In light of their slow progress in improving self-  
21          assessment and problem solving capabilities, we  
22          concluded their SALP category 3 improving rating was  
23          warranted.

24                   (Slide) The next slide outlines --

25                   COMMISSIONER ROGERS:       Excuse me.       Just

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1 before you go off that --

2 MR. MARTIN: Yes, sir?

3 COMMISSIONER ROGERS: -- could you just say  
4 a little bit about your thoughts with respect to  
5 plant operations? Because, quality verification--  
6 safety assessment and quality verification was the 3,  
7 improving in the prior SALP. The latest SALP is 3,  
8 improving, whereas there is no comment about improving  
9 with respect to plant operations. And yet, we keep  
10 hearing -- we've heard several times here that there  
11 is some feeling that that is -- plant operations are  
12 improving.

13 Does that mean that this improvement has  
14 taken place since the last SALP assessment was done,  
15 or did you see signs of it and it just didn't get  
16 mentioned in the SALP report?

17 MR. MARTIN: Let me respond to that. The  
18 SALP does comment on improvements that were observed  
19 in operations. However, the number of personnel  
20 errors, problems with attention to detail,  
21 particularly near the end of the SALP, showed that  
22 they were still having difficulty in providing  
23 consistent good performance.

24 We did not feel that they had succeeded in  
25 raising their standards to a category 2, but we did

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1 observe performance improvements. It was clearly  
2 there. Attitudes were being changed. There were a  
3 lot of new faces in different positions. Management  
4 on one unit was more visible in the plant. The other  
5 hadn't seen quite as much.

6 COMMISSIONER ROGERS: I'm just a little  
7 curious as to why the improving was noted with respect  
8 to the safety assessment and quality verification and  
9 not with respect to plant operations. Both got a 3.  
10 One was called 3, improving, and one was called 3.

11 MR. MARTIN: Understood. In the later part,  
12 the processes were in place to generate the momentum.  
13 The momentum, I think, was there. We saw improvement  
14 across the board in all the areas of oversight and  
15 assessment, communicating what expectations were,  
16 whereas in operations we did not see a consistent  
17 approach there. That was the problem.

18 (Slide) The next slide outlines the staff  
19 assessment of licensee readiness to restart Unit 1  
20 against the criteria of manual chapter 0350. The  
21 staff has concluded that the restart action plan is  
22 comprehensive and adequately addresses both hardware-  
23 specific and organization management problems that had  
24 to be resolved prior to restart of Unit 1. Root  
25 causes have been identified, corrective actions

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1 defined, verification activities planned, and longer-  
2 term improvement strategies outlined.

3           The Readiness Assessment Team inspection  
4 conducted last week found that the organization  
5 demonstrated clear improvement in all five underlying  
6 root causes of past performance problems. The  
7 managers and staff demonstrate support for the new way  
8 of doing business, including: better planning and work  
9 prioritization; formalized trouble-shooting and root  
10 cause analysis of problems; solicitation and  
11 resolution of staff concerns and identified problems;  
12 adherence to procedures; enhanced training and  
13 procedures; a questioning attitude; improved  
14 oversight, self-assessment, and performance tracking;  
15 better communications, coordination, and cooperation.

16           The team noted particular improvements in  
17 teamwork, problem solving, and self-assessment over  
18 that identified during the IATI. And some of those  
19 members of the IATI were on the earlier inspection, so  
20 that was noteworthy. Discussion with individuals  
21 about activities in progress showed substantially  
22 improved safety attitude and recognition that past  
23 practices had been part of the problem.

24           The team concluded that significant problems  
25 which developed during -- or would develop during

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1 restart of power operations would be identified and  
2 conservatively resolved. And with regard to the five  
3 underlying root causes, there were no impediments to  
4 restart.

5 Licensee management has demonstrated a  
6 commitment to improvement, and the leadership,  
7 resources and capability to bring it about. The  
8 Quality Assurance Department effectiveness in  
9 identifying problems has improved, and the  
10 establishment of an independent assessment group  
11 reporting to the Executive Vice President is viewed as  
12 a good initiative. Both on-site and off-site safety  
13 review committees have demonstrated improved  
14 assessment and oversight capabilities.

15 While the pending senior management changes  
16 represent a challenge to continued progress in  
17 institutionalizing the corrective actions implemented  
18 to date, the Board of Directors, the Executive  
19 Officer, and the Nuclear Oversight Committee are aware  
20 of those challenges and a plan for a period of  
21 transition has been established.

22 The operations and maintenance staff  
23 performance has improved since the end of the SALP  
24 cycle, as indicated by a significant reduction in  
25 personnel error caused events. Plant and corporate

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1 staff are capable of supporting operations. Problems  
2 are being identified. They're being communicated up  
3 the chain. They're being analyzed for cause.  
4 Corrective action is being planned and prioritized,  
5 and resolution is being controlled in an appropriate  
6 manner. The new system engineers are being  
7 effectively utilized to address emerging technical  
8 issues. The backlog of maintenance items continues to  
9 be reduced.

10 Training has been substantially upgraded,  
11 particularly in the area of emergency procedures,  
12 about the knowledge of the bases for those procedures  
13 and how to use those procedures. Procedures have been  
14 substantially upgraded, and there is clear evidence of  
15 a strong commitment to procedural adherence.

16 Industrial safety is emphasized and  
17 compliance is noteworthy. The staff understands and  
18 appears to have adopted the new standards of  
19 performance. Supervisors are increasingly seen at the  
20 work place, and new tools for self-assessment and  
21 performance trending are being established.

22 Staffing levels appear to be acceptable as  
23 long as the work schedule is paced to avoid challenge  
24 to the operations staff. The Readiness Assessment  
25 Team found clear evidence of teamwork and a

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1 significant improvement in attitude towards safety.  
2 While there is still room for improvement,  
3 particularly in realistic scheduling and eliminating  
4 personnel errors, progress has been substantial and  
5 the current level of staff performance supports  
6 permitting restart.

7 With regard to plant physical readiness to  
8 operate, the licensee must still complete a  
9 significant list of work requests and tests. We have  
10 reviewed and found acceptable the licensee's plans for  
11 start-up and power ascension. We've also reviewed a  
12 large sample of the licensee's power ascension and  
13 surveillance test procedures. We've concluded they  
14 are technically adequate, addressed outstanding  
15 testing issues, and with the exception of some  
16 required final licensee reviews and approvals, they  
17 appear acceptable for restart.

18 Finally, Unit 1 remains shut down under a  
19 confirmatory action letter which requires regional  
20 administrator approval for restart. Following  
21 licensee notification and NRC determination that the  
22 plant is ready to restart, I intend to coordinate with  
23 the EDO and the Director of NRR to supplement the CAL  
24 to authorize restart. The proposed power ascension  
25 program involves operation to 25, 60 and 100 percent

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1 power plateaus with licensee self-assessment and  
2 acceptable results needed for progress beyond each  
3 plateau.

4 The NRC will closely monitor the preparation  
5 for and implementation of the power ascension program,  
6 using an augmented inspection team headed by the  
7 senior resident inspector. The on-site inspection  
8 staff of three will be supplemented by additional  
9 inspectors and necessary specialists during periods of  
10 transition, testing and non-routine activities to  
11 enable 24 hour per day coverage for Unit 1 and normal  
12 coverage for Unit 2.

13 Inspection coverage will be reduced to  
14 normal levels during periods of extended stable  
15 routine operations. Inspection results and licensee  
16 assessment will be reviewed at each plateau by the NRC  
17 restart panel to confirm continued plant and staff  
18 readiness for further power escalation. The plant  
19 remains a category II facility requiring close Agency  
20 scrutiny.

21 At this time I have no further prepared  
22 comments and can answer your questions.

23 MR. TAYLOR: That concludes the staff's  
24 presentation.

25 CHAIRMAN CARR: Commissioner Remick?

1 COMMISSIONER REMICK: No questions.

2 CHAIRMAN CARR: Commissioner Roberts?

3 Commissioner Rogers?

4 COMMISSIONER ROGERS: Yes. What is the  
5 status of any generic letters and bulletins that are  
6 applicable to Nine Mile Point 1? Have they completed  
7 all such matters or are there some left hanging?  
8 Where do you expect that to stand?

9 DOCTOR MURLEY: I'll let Bob talk about the  
10 details. There's two that come to mind. Like each  
11 utility in the country, they are working on the IPE  
12 for their plant and that's going to take awhile. They  
13 have agreed, I believe, to install a hardened vent  
14 from the Mark I torus and the associated equipment  
15 that goes with that. That will be done at some later  
16 outage.

17 Are there any others, Bob, that come to  
18 mind?

19 MR. R. MARTIN: I don't believe there are  
20 any generic letters or bulletins which are, in your  
21 term, hanging fire which would affect restart at this  
22 point in time. There are a number of them that, of  
23 course, on their own schedule will proceed and  
24 continue into the future, but I don't believe any that  
25 would, in fact, restart.

1 COMMISSIONER ROGERS: Okay. Thank you.

2 I think that was the only thing I had.

3 CHAIRMAN CARR: Commissioner Curtiss?

4 COMMISSIONER CURTISS: Just a few loose ends  
5 here.

6 Have we reviewed all the INPO reports that  
7 have been prepared recently and is there anything of  
8 note there?

9 MR. COOK: Yes, sir, we have. I would  
10 characterize the INPO assessments as pretty much  
11 parallel with the NRC assessments.

12 COMMISSIONER CURTISS: Okay. Good.

13 On the staffing level question, as we talked  
14 about earlier, the SALP report talks about marginally  
15 acceptable staffing levels in area of maintenance.  
16 The Chairman mentioned the engineer area as well. To  
17 make sure I understand what's going on there because  
18 from what I understand you saying here, you're  
19 comfortable with the staffing levels now. Is that  
20 because they've been increased or because they've  
21 coordinated their activities better or what is it  
22 that's gotten us from a SALP report to where we are  
23 today?

24 MR. MARTIN: I'll ask Bill to correct me if  
25 I overstate my case. In the area of maintenance, they

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1 had two units that were in outage during the  
2 fall/winter time frame and the challenge to the staff  
3 was large then. We understand that there was some of  
4 the maintenance staff that was actually working at the  
5 steam plant, to help them recover. That, along with  
6 the two unit outage, although they were able to reduce  
7 the Unit 1 backlog of maintenance items, they were  
8 basically holding their own on Unit 2 and were not  
9 able to work off at that time a fairly substantial  
10 backlog. I think it was up around 2,000 work requests  
11 at that point.

12 Since then, they have had the people return  
13 from the steam plant and we are seeing that both Unit  
14 1 and Unit 2 backlogs are coming down. I agree with  
15 the licensee's assessment that with the new procedures  
16 and the new procedural adherence ethic, there has been  
17 a slower pace, but they've only had to do it once now.  
18 So, they are starting to build momentum and they're  
19 improving their maintenance capability.

20 In the area of engineering, early in the  
21 period they had a number of positions that they were  
22 struggling to get filled. They have filled many of  
23 those positions now. They are capable of supporting  
24 the restart of Unit 1 and now the delayed outage of  
25 Unit 2. But there's still a significant amount of

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1 engineering work that needs to be done and once these  
2 two activities are behind them, they've got a backlog  
3 of engineering activity they're going to have to work  
4 off. Effort is being made to get staff and I think  
5 it's acceptable where it is, but it's something to  
6 watch.

7 In the area of Operations, we noted in  
8 talking to the staff, actual operators out there,  
9 they're pacing themselves now. They recognize that  
10 back in the fall and whenever, they over extended  
11 themselves and there was a number of work items that  
12 are ready to be done and the operators just can't  
13 support them. They don't have enough people to get  
14 out there and do the tags and they're not going to do  
15 it. They're basically pacing themselves so they have  
16 good control over that plant.

17 So, although we're seeing good planning in  
18 terms of scheduling and taking into account these  
19 various resources that are available to hang tags, to  
20 do post maintenance testing, to operate breakers and  
21 things like that, the operation staff is somewhat  
22 limited right now. As long as they pace themselves  
23 based upon those resources, they'll be fine and that's  
24 something we'll have to watch.

25 COMMISSIONER CURTISS: Okay. I guess I have

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1 a general question on the subject of maintenance. I  
2 recall that maintenance team inspection that was done  
3 at this facility some time ago and they actually came  
4 in pretty much in the middle of the pack. I didn't  
5 recall them standing out as poor performers and I  
6 don't recall them performing in the way that's  
7 described in the SALP. Is it -- explain the  
8 difference between the maintenance team inspection and  
9 what you're saying in the SALP. Is it that we were  
10 still calibrating our maintenance team inspections at  
11 the time or that their performance has declined since  
12 then?

13 MR. MARTIN: It turns out that the  
14 maintenance team inspection was done, I think, in the  
15 winter of '87 time frame. The conclusion was  
16 basically effective maintenance. Two years later,  
17 '89, the spring of '89, the STI came in and did their  
18 thing. Their comment was that maintenance is getting  
19 done largely because of the experience and depth of  
20 the people, not so much the program. The program was  
21 not driving it, it was good staff. When the ITI  
22 performed their inspection, I think it was in the  
23 October time frame, they noted that maintenance was  
24 being done okay. About that time now we have the  
25 massive change in procedures, we have new faces and

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1 there were a number of personnel errors and  
2 inattention to detail during that period of time. We  
3 did not see the kind of improvement that we had  
4 expected. That's, I think, probably --

5 COMMISSIONER CURTISS: All right. Just one  
6 final question. Actually we received a letter this  
7 morning from the Atlantic States Legal Foundation  
8 raising a number of questions. Commissioner Rogers  
9 touched on one of them with the bulletins and the  
10 generic letters and they raise a number of questions  
11 about the torus wall thinning issue. I don't want to  
12 pursue that in detail here at this point, but if you  
13 could, at your convenience, get back to the Commission  
14 with your response on those questions, I'd appreciate  
15 that.

16 MR. TAYLOR: Yes.

17 COMMISSIONER CURTISS: That's all I have.

18 CHAIRMAN CARR: In your opinion, are the  
19 licensee's programs institutionalized and the way to  
20 ensure continuance and persistence as opposed to a  
21 quick get well?

22 MR. MARTIN: They're long past a quick get  
23 well. The staff, right down to the worker bee, has  
24 accepted these new standards. We will watch very  
25 carefully the transition to the new management team

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1 because they could derail that. If they're not  
2 careful, they could derail the corrective action  
3 they've taken so far. But there has been substantial  
4 improvement and I think it's well on its way to being  
5 institutionalized. They've still got several more  
6 years of nuclear improvement program to really make  
7 these things permanent.

8 CHAIRMAN CARR: How about our resident  
9 inspector? How do you feel about whether they're  
10 really in place or not and for how long?

11 MR. COOK: Well, sir, I don't have any  
12 reservations for restart of Unit 1. I think I've  
13 benefited from having been at the site for about four  
14 years now overseeing activities. I'm encouraged by  
15 what I've seen in recent months. There's in my mind,  
16 and the other residents on site, a clear change in  
17 attitude, in the approach to doing business from what  
18 we've seen in the past.

19 CHAIRMAN CARR: I'm trying to get a feel for  
20 the level of confidence we have that it's there to  
21 stay and not just there right now.

22 DOCTOR MURLEY: Could I give my views --

23 CHAIRMAN CARR: Sure.

24 DOCTOR MURLEY: -- Mr. Chairman? It's  
25 largely based on long, hard experience with other

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1 plants that have gone through this kind of trouble,  
2 what it takes to really embed the safety attitude at  
3 the site.

4 I think it's there now. From all the people  
5 we talked with, I did not get a sense at all that  
6 they're fighting the management. On the other hand, I  
7 think it's still going to take another couple years of  
8 close oversight by the top management to make sure  
9 that this kind of attitude becomes second nature to  
10 them, until almost some new -- the new people being  
11 trained are trained in this direction. So, I'd say  
12 it's taken a solid root, but it's still fragile. I  
13 think it needs another couple years, in my judgment.

14 MR. TAYLOR: We'd be looking for some  
15 sustained good performance on this unit to be  
16 convinced it's taken.

17 CHAIRMAN CARR: Okay. Based on the recent  
18 reevaluation of Unit 2's regual program, have you  
19 changed your conclusion from an unsat. to a sat. on  
20 that regual program?

21 MR. MARTIN: No, sir, we have not. They  
22 still have four items to finish up as part of their  
23 regual plan and improvement program. Once they have  
24 certified to us those are completed, say they have  
25 already met the ES-601 standards for a sat. program,

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1 based upon recommendation of my staff, I would then be  
2 prepared to make it a sat. program again.

3 CHAIRMAN CARR: And what's your current  
4 assessment of Unit 1's regual training program?

5 MR. MARTIN: We have not done a formal  
6 assessment of their regual program, although we have  
7 observed regual, most recently in the December time  
8 frame. We would second the licensee's conclusion that  
9 the large proportion of that staff successfully passed  
10 that regual exam and we anticipate that when we do our  
11 July formal review that they will do well.

12 CHAIRMAN CARR: Do you expect to have the  
13 inspection report from the Readiness Assessment Team  
14 or at least a summary of the findings available before  
15 you authorize restart?

16 MR. MARTIN: My understanding is that they  
17 will be ready to restart at the end of this month.  
18 We'll be probably getting the report out just about  
19 then.

20 CHAIRMAN CARR: Okay. Any other questions?

21 Well, I'd like to thank Niagara Mohawk Power  
22 Corporation and the NRC staff for this status report.  
23 What we have heard today has been encouraging.  
24 However, as authorization of Nine Mile Point Unit 1  
25 restart draws near, I caution the staff to maintain

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1 vigilance and to continue to monitor activities at the  
2 site to ensure that the corrective action programs put  
3 in place by the licensee remain effective.

4 Similarly, I would urge Niagara Mohawk Power  
5 Corporation not to forget the lessons learned from  
6 this experience and to continually monitor your own  
7 performance in order to preclude similar degradation  
8 in the future. This will require an ongoing effort.  
9 In a sense, this is a get well program that really has  
10 no end.

11 Before clearing the confirmative action  
12 letter and permitting Nine Mile Point 1 start-up, I  
13 request the staff provide an up to date status and  
14 consult with the Commission before they do that.

15 If there are no further comments, we stand  
16 adjourned.

17 (Whereupon, at 12:15 p.m., the above-  
18 entitled matter was concluded.)  
19  
20  
21  
22  
23  
24  
25

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of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON STATUS OF NINE MILE POINT 1 RESTART

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: MAY 14, 1990

were transcribed by me. I further certify that said transcription  
is accurate and complete, to the best of my ability, and that the  
transcript is a true and accurate record of the foregoing events.

Carol Lynch

Reporter's name: Peter Lynch

**NEAL R. GROSS**  
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WASHINGTON, D.C. 20005

NIAGARA MOHAWK POWER CORPORATION

MAY 14, 1990

PRESENTATION

TO THE

NRC COMMISSIONERS:

NINE MILE POINT UNIT 1 RESTART

### AGENDA

- |                                     |   |
|-------------------------------------|---|
| 1. OPENING REMARKS                  | WILLIAM DONLON, CHAIRMAN AND CEO                    |
| 2. BACKGROUND AND<br>CURRENT STATUS | LAWRENCE BURKHARDT, III<br>EXECUTIVE V.P. - NUCLEAR |
| 3. FINANCIAL STATUS                 | JOHN ENDRIES, PRESIDENT                             |
| 4. CONCLUDING REMARKS               | WILLIAM DONLON                                      |



STATUS OF ACTIVITIES

MANAGEMENT AND ORGANIZATIONAL ISSUES

CONFIDENT IN OUR ABILITY TO  
SAFELY OPERATE UNITS 1 AND 2

## BACKGROUND

1. SUCCESSFUL OPERATION 1969 - 1987
2. FEEDWATER TRANSIENT (DECEMBER 1987) LED  
TO PLANT SHUTDOWN
3. TECHNICAL & MANAGEMENT ISSUES IDENTIFIED
4. CONFIRMATORY ACTION LETTER 88-17  
DATED JULY 24, 1988
5. RESTART ACTION PLAN SUBMITTED DECEMBER 21, 1988  
AND APPROVED BY NRC ON SEPTEMBER 29, 1989

### RESTART ACTION PLAN

- ° EIGHTEEN SPECIFIC ISSUES
- ° UNDERLYING MANAGEMENT & ORGANIZATIONAL ISSUES
  - A. PLANNING & GOAL SETTING
  - B. PROBLEM IDENTIFICATION AND RESOLUTION
  - C. MANAGEMENT TECHNICAL FOCUS
  - D. STANDARDS OF PERFORMANCE & SELF ASSESSMENT
  - E. TEAMWORK
- ° IDENTIFIED RESTART CORRECTIVE ACTIONS AND  
LONG TERM STRATEGIES
- ° LED TO DEVELOPMENT OF NUCLEAR IMPROVEMENT PROGRAM  
AND COMPREHENSIVE RESTART ASSESSMENT

### SPECIFIC ISSUES

1. OUTAGE MANAGEMENT OVERSIGHT
2. MAINTENANCE OF OPERATOR LICENSES
3. EMERGENCY OPERATING PROCEDURES
4. INSERVICE INSPECTION
5. CONTROL OF COMMERCIAL GRADE ITEMS
6. FIRE BARRIER PENETRATIONS
7. TORUS WALL THINNING
8. SCRAM DISCHARGE VOLUME
9. APPENDIX J TESTING OF EMERGENCY CONDENSER  
AND SHUTDOWN COOLING VALVES

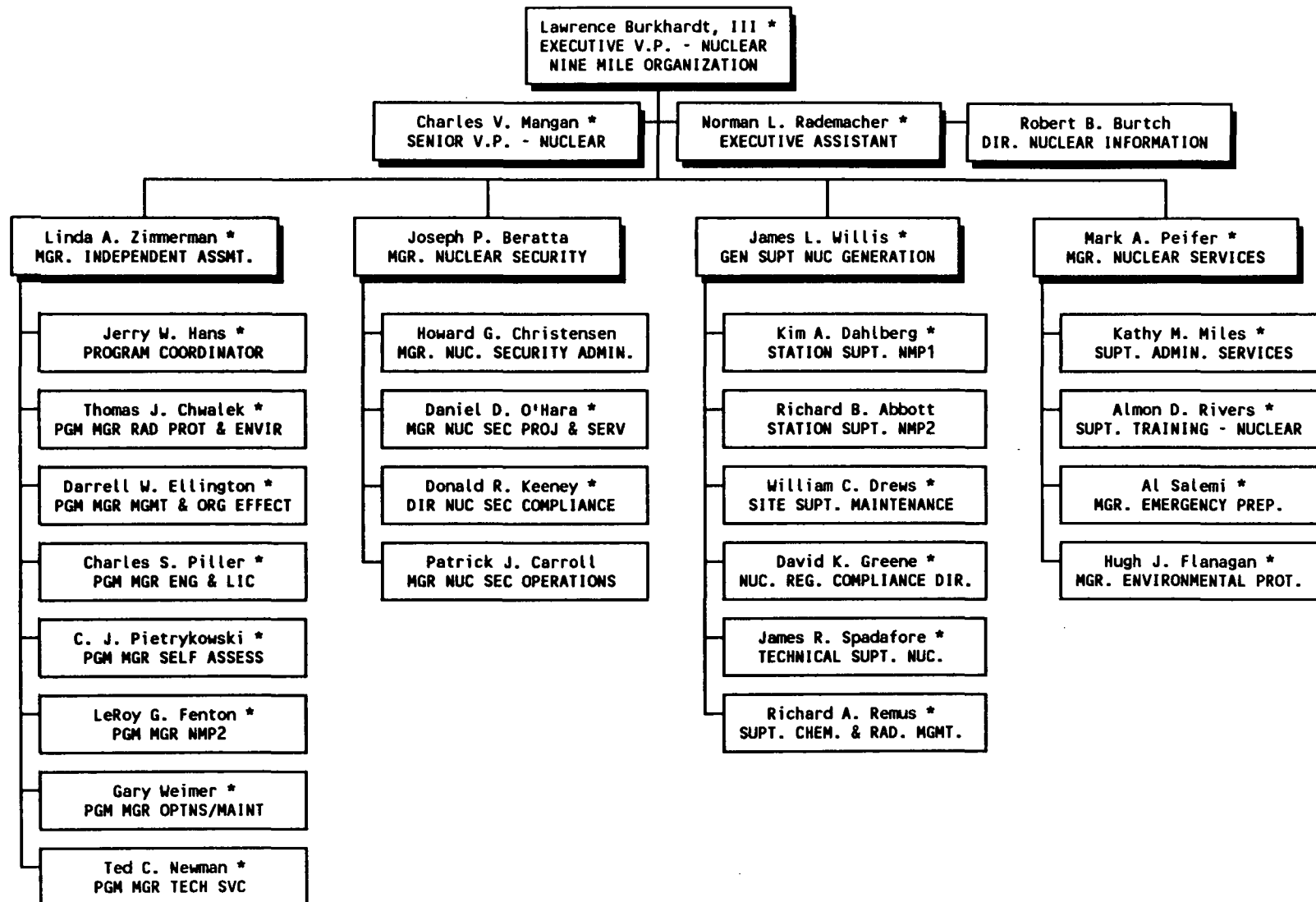
SPECIFIC ISSUES (Continued)

10. REACTOR PRESSURE VESSEL PRESSURE/TEMPERATURE CURVES
11. EROSION/CORROSION PROGRAM
12. MOTOR GENERATOR SET BATTERY CHARGERS
13. IMPLEMENTATION OF LONG-TERM PROGRAMS RELATED TO I&C  
TECHNICIAN ALLEGATION ISSUE
14. SAFETY SYSTEM FUNCTIONAL INSPECTION
15. CRACKS IN WALLS AND FLOORS
16. FEEDWATER NOZZLES
17. INSERVICE TESTING
18. 125 VDC SYSTEM CONCERNS

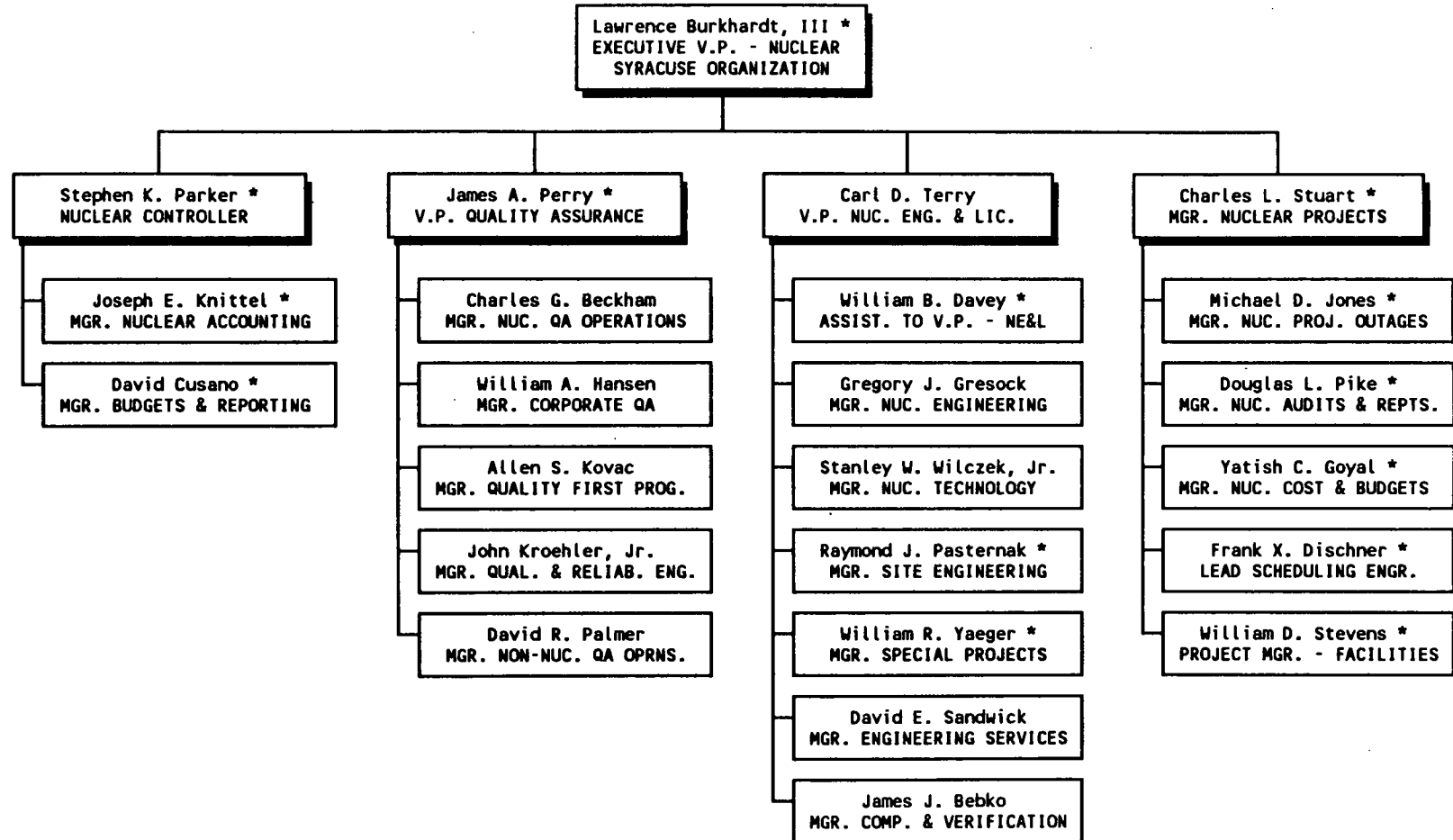
### KEY ORGANIZATIONAL CHANGES

1. INCLUDED QA IN THE NUCLEAR DIVISION
2. ESTABLISHED NUCLEAR PROJECTS GROUP
3. ESTABLISHED INDEPENDENT ASSESSMENT GROUP
4. REORGANIZED NUCLEAR GENERATION
  - OPERATIONS SUPPORT
  - INCREASED OPERATORS FOR ROTATIONAL SHIFTS
5. ADDED SYSTEM ENGINEERING AND SITE ENGINEERING

# NUCLEAR DIVISION ORGANIZATION



# NUCLEAR DIVISION ORGANIZATION





### UNDERLYING ROOT CAUSE #1

The management tasks of planning and goal setting had not kept pace with the changing needs of the Nuclear Division and with changes within the nuclear industry.

#### RESULTS:

- ° Communicated vision, mission and goals
- ° Provided continuing planning process - assures safe & reliable plant operation in full compliance with regulations
- ° Integrated Priority System developed and being implemented
- ° IATI found clear improvement
- ° Recent restart inspections confirmed sustained improvement

## UNDERLYING ROOT CAUSE #2

The process for identifying and resolving issues before they become regulatory concerns was less than adequate in that there was not an integrated or consistent process used to identify, analyze, correct, and assess problems in a timely way.

### RESULTS:

- ° Identified and resolved deficiencies
- ° Developing plan for integrated deficiency reporting and problem-solving process
- ° Improved root cause and trending
- ° Formal training on current problem solving processes
- ° IATI noted improvement, but some weaknesses
- ° Readiness Assessment Team inspection noted clear improvement
- ° Wealth of Experience in problem solving during outage

### UNDERLYING ROOT CAUSE #3

Management's technical focus had created an organizational culture that diverts attention away from the needs and effective use of employees.

### RESULTS:

- ° Management demonstrating Standards of Performance in addressing employee needs and concerns
- ° IATI found clear improvement
- ° Recent restart inspections confirmed sustained improvement

#### UNDERLYING ROOT CAUSE #4

Standards of Performance had not been defined or described sufficiently for effective assessment, and self-assessments had not been consistent or effective.

#### RESULTS:

- ° SOP's defined, communicated and being personalized
- ° Restart Self-Assessment developed and implemented
- ° Self-Assessment becoming a way of life
- ° Independent Assessment Group established & conducting follow-on assessments
- ° IATI noted improvement, but some weaknesses
- ° Readiness Assessment Team inspection noted clear improvement

### UNDERLYING ROOT CAUSE #5

Lack of effective teamwork within the Nuclear Division and with support organizations was evidenced by lack of coordination, cooperation, and communication in carrying out responsibilities.

### RESULTS:

- ° Interpersonal skills improved
- ° Effective team building sessions held between Generation and Engineering
- ° Training and Operations formed Operator Training Program Advisory Committee
- ° IATI noted clear improvement
- ° Readiness Assessment Team inspection confirmed sustained improvement

### HOW PROGRESS IS MEASURED

- ° LINE MANAGEMENT HAS APPROPRIATE LEADERSHIP SKILLS
- ° HIGH STANDARDS OF PERFORMANCE EXHIBITED
- ° EFFECTIVE PLANNING & TEAMWORK HAVE IMPROVED DECISION MAKING & PROBLEM SOLVING

### HOW PROGRESS IS MEASURED (Continued)

- ° PROGRAMS AND POLICIES IN PLACE TO ENHANCE SELF-ASSESSMENT & CONTINUE IMPROVEMENT IN MANAGEMENT & ORGANIZATIONAL EFFECTIVENESS
- ° INPO VISIT REINFORCED THESE CONCLUSIONS
- ° LATEST SALP NOTES TURNING POINT IN PERFORMANCE
  - READINESS ASSESSMENT TEAM INSPECTION NOTED RECENT IMPROVEMENTS IN ALL CATEGORY 3 AREAS

### RESTART ACTION PLAN CLOSEOUT

- ° 11 OPEN RESTART ACTION PLAN ITEMS
- ° 9 ASSESSMENT OPEN ITEMS
- ° MOSTLY TIED TO PHYSICAL WORK EFFORT



### PHYSICAL WORK STATUS

- ° 720 TOTAL OPEN ITEMS OF WHICH  
223 ARE WORK REQUESTS
- ° OVER 32,000 WORK ITEMS COMPLETED  
DURING OUTAGE

### NORMAL PREPARATIONS FOR RETURN TO SERVICE

- ° SHUTDOWN MARGIN TEST, VESSEL HYDRO, ECCS  
LOSS OF OFFSITE POWER
- ° SURVEILLANCE TESTING
- ° VALVE LINEUPS
- ° OPERABILITY CHECKS
- ° POST MAINTENANCE TESTING
- ° PREVENTIVE MAINTENANCE
- ° EQUIPMENT QUALIFICATION CHECKS

### EXTRA STEPS FOR RETURN TO SERVICE

- ° SPECIAL ADMINISTRATIVE PROCEDURES
- ° AREA AND SYSTEM WALKDOWNS
- ° PLANT PROCEDURE CHECKLISTS
- ° ENHANCED STRUCTURED REVIEWS OF OPEN WORK DOCUMENTS
- ° SELF ASSESSMENT PROGRAMS
- ° CREW TRAINING IN SIMULATOR
- ° TEAM BUILDING SESSIONS
- ° OPERATIONS MANAGEMENT ON-SHIFT
- ° ENHANCED CONTROL OVER REACTIVITY
- ° POWER ASCENSION PROGRAM

NINE MILE POINT UNIT 1  
RESTART POWER ASCENSION

- ° POWER ASCENSION TESTS
- ° SURVEILLANCE TESTS
- ° PERSONNEL PERFORMANCE ASSESSMENTS

## POWER ASCENSION - TESTS

TESTS WERE SELECTED BASED UPON REVIEW OF:

- ° UNIT 1 INITIAL TEST PROGRAM
- ° UNIT 2 START-UP EXPERIENCE
- ° REGULATORY GUIDE 1.68
- ° PLANT MODIFICATIONS
- ° RESTART PROGRAMS AT OTHER UNITS

### POWER ASCENSION - TESTS (Continued)

- ° TEST PHASES 25%, 60%, 100%
  - SORC REVIEW TEST RESULTS
  - SORC REVIEW ASSESSMENT RESULTS
  - SORC APPROVAL PHASE PROGRESSION
  - SENIOR MANAGEMENT APPROVAL

## POWER ASCENSION TESTS

°PAT-1	Neutron Monitoring	Complete functional checkout of SRM, IRM, APRM Systems
°PAT-2	Turbine Trip Within Bypass Capacity	Measure Bypass valve capacity and response time
°PAT-3	Emergency Cooling System	Evaluate isolation setpoints, verify level controller performance, and Remote Shutdown Panel Demonstration
°PAT-4	Feedwater Control System	Complete functional checkout of control system in various alignments
°PAT-5	LPRM Response	Verify proper detector alignment
°PAT-6	Piping Expansion	Support hot functional walkdowns
°PAT-7	Containment Spray Heat Exchangers	Verify heat removal capability
°PAT-8	Feedwater System	Determine maximum runout capacity
°PAT-9	Water Level Instrumentation	Evaluate deviations between instruments and varying core flow effects
°PAT-10	Loss of Offsite Power	Verify proper function of emergency power system
°PAT-11	Reactor Bldg. Closed Loop Cooling Heat Exchangers	Verify heat removal capacity

### POWER ASCENSION - ASSESSMENTS

- ° ON SHIFT MANAGERS WILL ASSESS PERSONNEL PERFORMANCE OF OPERATORS, MAINTENANCE, RADIATION PROTECTION AND CHEMISTRY ACTIVITIES
  - WILL ALSO LOOK AT TEAMWORK, PLANNING, COMMUNICATIONS AND COMMAND ON CONTROL
- ° INDEPENDENT ASSESSMENT GROUP WILL PROVIDE PARALLEL ASSESSMENT
- ° QUALITY ASSURANCE AND INDEPENDENT SAFETY ENGINEERING GROUP WILL PROVIDE ADDITIONAL OVERSIGHT
- ° OPERATOR READINESS, PROFESSIONALISM AND ATTITUDE



### OTHER TOPICS

- ° OPERATOR REQUALIFICATION
- ° TRAINING PROGRAM ACCREDITATION RENEWAL
- ° TORUS
- ° 125VDC
- ° RBCLC HEAT EXCHANGER
- ° OPERATIONS AND MAINTENANCE STAFFING
- ° UNIT 2 PERFORMANCE

### SCHEDULE

- ° EARLIEST RESTART DATE IS MAY 30, 1990
- ° NRC READINESS ASSESSMENT TEAM INSPECTION FOUND  
NO IMPEDIMENTS TO RESTART

### WHERE DO WE STAND

- ° CONFIDENT IN OUR ABILITY TO OPERATE UNIT 1 AND 2
- ° CULTURAL CHANGE WORKING
- ° STANDARDS OF PERFORMANCE ADOPTED
- ° COMPREHENSIVE TIERED LEADERSHIP TRAINING  
PROGRAM DEVELOPED

### CONCLUSION

- ° CURRENT MANAGEMENT HAS APPROPRIATE LEADERSHIP
- ° HIGH STANDARDS OF PERFORMANCE BEING DEMONSTRATED
- ° WILL COMPLETE REMAINING ACTIONS
- ° READINESS FOR RESTART UNIT 1
- ° FULLY COMMITTED TO SAFETY, QUALITY AND EXCELLENCE

**STATUS BRIEFING ON  
NINE MILE POINT NUCLEAR STATION,  
UNIT 1**

**May 14, 1990**

**Thomas T. Martin  
Dr. Thomas E. Murley**

**Contact: Glenn Meyer**

**Phone: FTS 346-5183**

# CHRONOLOGY

December 19, 1987	Plant Shutdown
March 28, 1988	CAL on Operator Licenses
June 1988	Close NRC Plant Monitoring Required
July 24, 1988	CAL on Management Effectiveness
December 22, 1988	Restart Action Plan
January-March 1989	Special Team Inspection
July 17-28, 1989	Requalification Program Evaluation - Unit 2

# CHRONOLOGY (continued)

August 22-28, 1989	AIT on Radwaste Building
September 8, 1989	Restart Readiness Report
September 29, 1989	Staff approval of Restart Action Plan
October 1989	Integrated Assessment Team Inspection
March 21-22, 1990	INPO Accreditation of Training Programs on Probation
April 30 - May 4, 1990	Requalification Program Reevaluation - Unit 2
May 7-11, 1990	Readiness Assessment Team Inspection

# SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

	3/1/88- <u>2/28/89</u>	3/1/89- <u>2/28/90</u>
Plant Operations	3	3
Radiological Controls	2	2
Maintenance/ Surveillance	3	3
Emergency Preparedness	1	1
Security	1	1
Engineering/Technical Support	3	2
Safety Assessment/ Quality Verification	3 Improving	3 Improving



# **CURRENT ASSESSMENT**

- o Root Causes identified and addressed**
- o Licensee Management Organization and Oversight**
- o Plant and Corporate Staff Readiness**
- o Physical Plant Readiness**
- o Regulatory Requirements Readiness**



**ATLANTIC STATES**  
**LEGAL FOUNDATION, INC.**

May 14, 1990

Chair Kenneth Carr  
Commissioner Thomas Roberts  
Commissioner Kenneth Rogers  
Commissioner Forrest Remick  
Commissioner James Curtiss  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

In Regard to Nine Mile Point Unit 1

Dear Chair Carr and Commissioners:

I am writing on behalf of Retire Nine Mile 1, an organization made up of people who live in upstate New York, many of them very close to the Nine Mile Point Unit 1 nuclear generating station, who believe that from both an economic and safety point of view, Nine Mile Point Unit 1 should be decommissioned.

The Nine Mile Point Unit 1 plant has been closed since December, 1987, and we are writing to urge the Commission to keep it closed until the Commission holds full and complete evidentiary hearings to consider the following concerns of Retire Nine Mile 1. We believe that without a hearing and a full examination the NRC cannot assure the requisite health and safety of the public.

Since a briefing by the Staff on Nine Mile Point Unit 1 is on the Commission agenda for May 14, 1990 the Staff may be in agreement with Niagara Mohawk that the plant is ready for restart. If so, the Staff surely must have answers to the following questions which members of Retire Nine Mile 1 hereby request.

**GENERIC ISSUES**

1. Has Niagara Mohawk completed the actions required by all generic letters and bulletins issued by the NRC applicable to Nine Mile Point Unit 1?

2. If not, please have the NRC Staff identify the safety

requirements addressed in the generic letters and bulletins which have not been completed at Nine Mile Point Unit 1 and explain why Nine Mile Point Unit 1 should be allowed to restart without implementing safety requirements which the NRC itself has determined are needed.

#### **THE INTEGRITY OF THE TORUS**

We are aware of the NRC's response of June 5, 1989 to the Ecology Center of Southern California's generic complaint about the General Electric Mark I containment. We believe that Nine Mile Unit 1 can be distinguished from the NRC's response to that Petition because in the specific case of Nine Mile Point Unit 1, there is continuing evidence of the thinning of the torus walls.

While Niagara Mohawk contends in their letter to the Commission of November 22, 1989 that there is "sufficient wall thickness...to provide at least one additional operating cycle at Nine Mile Point Unit 1 before corrective actions must be taken", recent reports of accelerated corrosion rates at Oyster Creek raise grave doubts about the validity of the basis of Niagara Mohawk's assertions.

Members of Retire Nine Mile 1 especially request that the Commission ask the following questions, and provide us with the answers before allowing the plant to restart:

1. For what percentage of the torus wall have thickness measurements been made?
2. What were the results?
3. Has the NRC or will the NRC require Niagara Mohawk to measure the thickness of the entire torus before permitting the plant to restart? If not, why not?
4. What is the minimum required wall thickness?
5. What is the standard or basis for saying that that is the minimum required torus wall thickness given that the torus at Nine Mile Point Unit 1 (and at Oyster Creek) were--unlike all other Mark I containments--originally designed only to withstand a lower pressure than the drywell? In all subsequent Mark I containments the torus and drywell have the same design pressure and thus have thicker torus walls than Nine Mile Point Unit 1.
6. Niagara Mohawk contends in a March, 1990 Economic Analysis of Continued Operation of the Nine Mile Point Unit 1 Nuclear

Nuclear Regulatory Chair and Commissioners  
May 14, 1990  
Page 3

Station prepared for the New York Public Service Commission, page S-4, that it will cost "less than \$15 million to correct" the torus. What is the purpose of postponing this repair given the relatively low cost of such repair compared to the already great incurred cost of the present prolonged outage and the potential risk to the health and safety of the public of postponement?

**THE INTEGRITY AND COMPETENCE OF MANAGEMENT**

Recently it was revealed (by a local television station and not Niagara Mohawk) that a spill of radioactive water was concealed by Niagara Mohawk from the NRC and, of course, the public for eleven years. The same management which elected to illegally keep secret important regulatory information is still "in charge".

Management inability to guarantee performance standards and quality control has been a continuing theme of the NRC's complaints about Nine Mile Point Unit 1. Indeed, complaints about management competence and veracity have been a feature of both state and federal regulation of Niagara Mohawk for years.

Given the great deal of attention that the NRC focused on managerial competence and integrity at Three Mile Island, we believe that their importance cannot be overstated. With this background, what basis is there now for believing that Niagara Mohawk has the requisite integrity and technical competence to operate Nine Mile Point Unit 1? Specifically, can the Commission be sure that the health and safety of the public can be assured given the most recent SALP report which continues to document operator failure?

In conclusion, the members of Retire Nine Mile 1 believe that a decision to permit restart, made under pressure from a financially prostrate utility can hardly provide the public with any assurance that the decision is based only on the company having achieved an adequate level of safety. Moreover, we believe that such assessment can be reached only after a full evidentiary hearing where members of Retire Nine Mile 1, other members of the public, and state officials can participate.

Sincerely yours,



Rosemary S. Pooler, Esq.  
Vice President for Legal Affairs



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos.: 50-220  
50-410

MAY 07 1990

Niagara Mohawk Power Corporation  
ATTN: Mr. J. Endries  
President  
301 Plainfield Road  
Syracuse, New York 13212

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP): Initial  
Report Nos. 50-220/89-99 and 50-410/89-99

An NRC SALP Board reviewed and evaluated the performance of your Nine Mile Point Units 1 and 2 for the period of March 1, 1989 to February 28, 1990. The results of this assessment are documented in the enclosed Initial SALP Report. A meeting will be scheduled to discuss this assessment.

At the SALP meeting you should be prepared to discuss our assessment and your plans to improve performance. The meeting is intended to be a candid dialogue in which any comments you may have regarding our report are discussed. Additionally, you are requested to provide written comments on our assessment within 30 days after the meeting with particular emphasis on your planned corrective actions in functional areas rated Category 3.

We appreciate your cooperation.

Sincerely,

A handwritten signature in black ink, which appears to read "Thomas T. Martin".

Thomas T. Martin  
Regional Administrator

Enclosure: Initial SALP Report Nos. 50-220/89-99 and 50-410/89-99

cc w/encl:

W. Donlon, Chief Executive Officer and Chairman of the Board

L. Burkhardt, Executive Vice President, Nuclear Operations

G. Wilson, Senior Attorney

J. Perry, Vice President, Quality Assurance

C. Mangan, Senior Vice President, Nuclear Generation

C. Terry, Vice President, Nuclear Engineering and Licensing

J. Willis, General Superintendent

K. Dahlberg, Station Superintendent, Unit 1

R. Abbott, Station Superintendent, Unit 2

M. Colomb, Unit 2 Superintendent, Operations

W. Hansen, Manager, Corporate Quality Assurance

C. Beckham, Manager, Nuclear Quality Assurance Operations

M. Peifer, Manager, Nuclear Service

C. Stuart, Manager, Nuclear Projects

Connor & Wetterhahn

Director, Power Division, Department of Public Service, State of New York

J. Warden, New York Consumer Protection Branch

State of New York, Department of Law

Public Document Room (PDR)

Local Public Document Room (LPDR)

Nuclear Safety Information Center (NSIC)

NRC Resident Inspector

State of New York, SLO Designee

K. Abraham, PAO (23 copies)

Chairman Carr

Commissioner Roberts

Commissioner Rogers

Commissioner Curtiss

Commissioner Remick

INITIAL SALP REPORT

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

REPORT NO. 89-99

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNITS 1 AND 2

ASSESSMENT PERIOD: MARCH 1, 1989 to FEBRUARY 28, 1990

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Attachment 1 - SALP Evaluation Criteria



## I. INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) Program is an integrated NRC staff effort to collect available observations and data on a periodic basis and to evaluate licensee performance on the basis of this information. The program is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. It is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful feedback to the licensee's management regarding the NRC's assessment of the facility's performance in each of seven functional areas.

An NRC SALP Board, composed of the staff members listed below, met on April 5, 1990, to review the observations and data on performance, and to assess the performance of the Niagara Mohawk Power Corporation (Niagara Mohawk) at Nine Mile Point, Units 1 and 2, in accordance with NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." The guidance and evaluation criteria are summarized in Attachment 1 to this report. The Board's findings and recommendations were forwarded to the NRC Regional Administrator for approval and issuance.

This report is the NRC's assessment of Niagara Mohawk's safety performance at Nine Mile Point Units 1 and 2 for the period March 1, 1989 through February 28, 1990.

The SALP Board for Nine Mile Point Units 1 and 2 was composed of:

### Board Chairman

W. Kane, Director, Division of Reactor Projects (DRP)

### Board Members

R. Capra, Director, Project Directorate No. 1-1, Office of Nuclear Reactor Regulation (NRR)  
B. Cook, Senior Resident Inspector  
R. Gallo, Chief, Operations Branch, Division of Reactor Safety (DRS)  
M. Knapp, Director, Division of Radiological Safety and Safeguards (DRSS)  
J. Linville, Chief, Reactor Project Branch No. 1, DRP  
R. Martin, Project Manager, NRR  
G. Meyer, Chief, Reactor Projects Section No. 1B, DRP

### Other Attendees (Part-time)

C. Anderson, Chief, Plant Systems Section, DRS  
R. Bellamy, Chief, Facilities Radiological Safety and Safeguards Branch, DRSS  
R. Bores, Chief, Effluents Radiation Protection Section, DRSS  
C. Conklin, Senior Emergency Preparedness Specialist, DRSS  
R. Conte, Chief, Boiling Water Reactor Section, DRS  
T. Dexter, Physical Security Inspector, DRSS  
T. Dragoun, Senior Radiation Specialist, DRSS  
R. Laura, Resident Inspector (Full-time)  
R. Temps, Resident Inspector (Full-time)

## II. SUMMARY OF RESULTS

### II.A Overview

Despite good intentions and extensive planning, the progress at Nine Mile Point Units 1 and 2 was limited. The high standards and corresponding Category 1 ratings established in the security and emergency preparedness areas were maintained, the Category 2 rating in radiological controls continued, and the quality of engineering work improved sufficiently to merit a Category 2 rating. However, the efforts to correct programmatic problems in the plant operations and maintenance/surveillance areas did not result in sufficient overall improvements in these areas to warrant changes in the previous Category 3 ratings. The inability to improve significantly was further reflected in a repeat Category 3 rating with an improving trend in the assurance of quality/safety assessment area.

In the plant operations area, progress was noted; training problems regarding Unit 1 licensed operators were resolved, and Unit 2 was continuously operated for a significant time period. However, the Unit 2 operator requalification training program was rated unsatisfactory, and some of the Unit 1 operator training problems found earlier were repeated. Further, at both units the incidence of personnel errors and poor control of equipment was high and resulted in numerous operational events.

Good progress occurred in the surveillance area. Thorough, extensive reviews of required testing and procedures formed the basis for better planning and implementation of Technical Specification testing, inservice testing, and inservice inspection. However, there was not significant progress in the maintenance area, and equipment problems and errors by maintenance personnel frequently resulted in operational events at Unit 1 and reactor scrams, safety system actuations, and unplanned outages at Unit 2.

The improved quality of some engineering work appeared to be a direct result of increased management involvement. However, a number of examples of ineffective engineering and technical support were noted.

There was an apparent turning point in Niagara Mohawk's approach to assuring quality. The Restart Action Plan was responsible for the better problem identification, more critical problem evaluation and self-assessment, and the establishment of programs and standards to promote and sustain good performance. The approach appeared to have enabled the improved results noted in the engineering and surveillance areas and the generally improving direction in most other areas. However, the performance in several areas remained at minimally acceptable levels, and the challenge for Niagara Mohawk management remains to utilize this better approach to produce improved results on a consistent basis in all aspects of plant operations.

## II.B Facility Performance Analysis Summary

<u>Functional Area</u>	<u>Last Period</u> (3/1/88-2/28/89)	<u>This Period</u> (3/1/89-2/28/90)
Plant Operations		
Unit 1	3	3
Unit 2	3	3
Radiological Controls	2	2
Maintenance/Surveillance	3	3
Emergency Preparedness	1	1
Security	1	1
Engineering/Technical Support	3	2
Safety Assessment/Quality Verification	3 Improving	3 Improving

## II.C Unplanned Shutdowns, Plant Trips, and Forced Outages

### Unit 1

Unit 1 was in an extended shutdown throughout this assessment period. Some reactor protection system (RPS) actuations occurred while the plant was shut-down and are discussed in the Maintenance and Surveillance section.

### Unit 2

1. Loose wires in the main generator potential transformer cubicle actuated a generator protection relay causing a turbine trip and a subsequent automatic reactor scram. Vibration had loosened the screws holding down the wires. The preventive maintenance (PM) instructions for the transformer were revised to include the screws and wires. The unit was shut-down for five days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
4/13/89	100%	Inadequate PM	Maintenance

2. During a turbine surveillance test, a licensed operator used a walkie-talkie near the electro-hydraulic control (EHC) cabinet and caused inadvertent turbine control and bypass valve movement. This created a pressure spike which resulted in an automatic reactor scram initiated by a high neutron flux trip. The unit remained shutdown for two days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
4/22/89	100%	Personnel error	Operations

3. An unexpected downshift of a reactor recirculation pump resulted in reactor operational conditions in the unacceptable area of the power-to-flow map. A manual reactor scram was initiated as specified by the operating procedures. Later evaluation determined that a power supply failure caused the downshift. The unit remained shutdown for 16 days for a scheduled two week maintenance and surveillance outage.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
9/8/89	88%	Random equipment failure	NA*

4. An inappropriate isolation during preventive maintenance on the B condenser air removal pump resulted in the loss of condenser vacuum and an automatic reactor scram. The procedure did not caution that an interlock could affect another system, and maintenance personnel did not properly assess the plant impact of the maintenance. Also, operations personnel did not identify the error during their review. The unit remained shutdown for three days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
10/13/89	54%	Procedural deficiency	Maintenance

5. Niagara Mohawk initiated a plant shutdown due to increasing drywell floor drain leak rate. Inadequate control of steam loads and feedwater during the shutdown resulted in a core reactivity transient and an automatic reactor scram caused by an upscale trip of the intermediate range monitors (IRMs). The unit remained shutdown for seven days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
10/18/89	1%	Personnel errors	Operations

6. Niagara Mohawk initiated a plant shutdown to resolve high dissolved copper levels in the circulating water system. The acid used to control circulating water chemistry had leaked past closed isolation valves and inadvertently corroded the copper condenser tubes. Corrective actions included design modifications of the isolation valves. The unit remained shutdown for ten days until an agreement was reached with the New York State Department of Environmental Conservation about the discharge of the copper containing circulating water to the lake.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
10/28/89	4%	Design deficiency	Engineering/Technical Support

7. An EHC malfunction caused the turbine bypass valves to open and the turbine control valves to close. This resulted in an increase in reactor pressure and a resultant automatic reactor scram due to high neutron flux signals. A ground introduced by a minor modification had apparently caused the malfunction. The unit remained shutdown for six days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
12/1/89	97%	Personnel error	Engineering/Technical Support

8. A reactor startup was terminated, and a plant shutdown was initiated due to excessive drywell leakage. A valve packing was found to be leaking and was replaced. The unit remained shutdown for eight days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
12/7/89	_ 1%	Random equipment failure	NA*

9. Feed pump vibration and mechanical seal problems resulted in a plant shutdown. A common design problem in the feed pump internal components was identified that had not been found during numerous, previous repairs. The unit remained shutdown for 40 days.

<u>Date</u>	<u>Power</u>	<u>Root Cause</u>	<u>Functional Area</u>
12/25/89	60%	Inadequate troubleshooting	Maintenance

\*NA indicates that no performance implications exist at this time.

### III. PERFORMANCE ANALYSIS

#### III.A Plant Operations

##### III.A.1 Unit 1

The previous SALP report rated Plant Operations at Unit 1 as Category 3. Contributing to this rating were inappropriate operator attitudes toward training, weak operator proficiency regarding the emergency operating procedures (EOPs), and deficiencies in the licensed operator requalification training program. NRC was particularly concerned that station management had not been effective in identifying and correcting these deficiencies.

##### III.A.1.a Analysis

Overall, during this period, station management made substantial progress in addressing and correcting the concerns from the previous SALP report. However, other problems were noted relative to the evaluation of personnel performance, self-assessment capability and problem identification, and attainment of personnel performance at the level described in the Nuclear Division Standards of Performance.

The licensed operator requalification program improved. Management attention to licensed operator training significantly increased, and there was evidence that the operations department had taken responsibility for the quality of training. Additionally, operators demonstrated their acceptance of the responsibility for the quality of training, which was in contrast to their attitude towards EOP training noted in the last SALP period.

Operator use and proficiency with the EOPs greatly improved during this SALP period. A May 1989 inspection concluded that five of the six operating crews demonstrated a satisfactory level of performance in the use of the EOPs; however, one crew and one individual did not. Additionally, the command and control of the operating shifts represented a generic weakness regarding crew communications and the assignment of crew member duties. A September 1989 inspection concluded that both assessed operating crews demonstrated a satisfactory level of performance, but that two senior reactor operators (SROs) did not. The prior generic weakness in command and control was determined to be satisfactorily addressed; however, certain other generic weaknesses (inadequate assessment of power board losses, not using all available indications for diagnosis of events, and occasional slow recognition of plant trends) still existed, which indicated that corrective actions had not been totally effective. Further, Niagara Mohawk self-assessments prior to the NRC reviews had not found the operator problems or the generic weaknesses.

As the unit remained shutdown throughout the period, assessment of plant power operations was not possible. Nevertheless, licensed operators demonstrated improved performance in some other areas. For example, the operations staff's support of maintenance and surveillance activities was good, with only minor problems noted. Good teamwork and support existed for the numerous initial runs of inservice tests, inservice inspection hydrostatic tests and other special testing. Refueling operations were performed in a professional, appropriately paced and competent manner by the operators.

However, the above good performance contrasted with many events in which licensed operators performed poorly. These events consisted of: accidental flushing of a condensate demineralizer to radioactive waste processing due to a valve misalignment; emergency ventilation (EV) initiations due to procedural and personnel errors; EV initiations due to improper tagging control; improper control of source range monitor (SRM) bypass function during refueling operations over three shifts; and a valve misalignment of the reactor building closed loop cooling system. The SRM incident was noteworthy in that the improper position of the bypass switch was overlooked by the operators during loading of fuel assemblies and during two shift turnovers. These events were the result of causes which included operator knowledge deficiencies, poor communications, inadequate plant impact assessment, poor system status control, or inadequacies regarding administrative procedures. Lastly, licensed operator participation in the initial set of reload system walkdowns was judged to be poor, in that the operators failed to identify numerous plant deficiencies identified during later walkdowns.

Operations department management achieved a better approach to operations in some areas. Specifically, the October 1989 Integrated Assessment Team Inspection (IATI) determined that operations personnel had been well integrated into the planning and scheduling process, cooperation between the operations and training departments had improved (the interdepartmental committee had played a major role in this improvement), and management had increased its attention to the needs and effective utilization of employees, resulting in improved teamwork. Further, operators were not as isolated as they were noted to have been in the previous period. Operations management was sensitive to career development and had begun long range planning to enable more career opportunities. Licensed operator staffing was at minimal but acceptable levels.

However, operations management weaknesses were apparent in the improper control and tracking of overtime, the failure to verify adequacy of licensed operators medical examinations, poor communications with operators regarding the requalification examinations, and a weak investigation into the SRM incident. Further, operations management did not aggressively perform self-assessments, and the completed self-assessments were ineffective. Operations management emphasis on improving in the areas of operator training and EOPs appeared to have been beneficial in these areas but had resulted in less attention being paid to day-to-day activities. Although many of these events and problems were of low safety significance, cumulatively they indicated the need for more effective management oversight of daily operations.



### Summary

The concerns of the last assessment involving operator training were adequately addressed as a result of increased management focus. However, the performance of licensed operators in the plant varied; good control of testing and refueling activities existed at times, but a number of minor events were caused by personnel errors. More effective management, particularly oversight of daily operations, appeared to be needed to raise overall operations department performance. Insufficient progress was demonstrated to warrant a change in the previous rating.

#### III.A.1.b Performance Rating

Category 3

#### III.A.1.c Recommendations

None

#### III.A.2 Unit 2

The previous SALP report rated Plant Operations at Unit 2 as Category 3. Personnel errors caused by inattention to detail or failure to follow procedural requirements had occurred at a high rate and had caused three reactor scrams. These errors had reflected station and corporate management's low expectations and acceptance of a low level of performance. The SALP Board recommended that Niagara Mohawk raise the performance expectations of the Unit 2 operations department and reduce the number of lit annunciators on the main control panels.

#### III.A.2.a Analysis

Overall, during this assessment period, the performance of the operations staff was inconsistent and demonstrated only limited progress. Unit 2 was continuously operated for 135 days during which time few personnel errors occurred. However, this good performance was contrasted with the unsatisfactory rating of the licensed operator requalification program, three automatic scrams caused by personnel errors, and a frequent, continued inability to control component and system status.

The Requalification Training Program for licensed operators was rated unsatisfactory. This was based on nine individual failures out of 24 on at least one portion of the examination. Also, two of six crews (recomposed for examination purposes) were determined to be unsatisfactory on the simulator. Individual performance and knowledge deficiencies were noted. Further, weaknesses in the examination process implemented by Niagara Mohawk contributed to the unsatisfactory rating. For example, the written test examination for the second week of the requalification examination did not reflect the generic NRC staff comments incorporated on the first week's examination.

Niagara Mohawk's initial written response to the examination results did not address why the training and operations departments had failed to identify the problems in its requalification program prior to the NRC-administered examinations. Also, it appeared that a complete root cause analysis may not have been performed without prompting by NRC. The major contributor to the identified performance problems appeared to have been unclear management expectations, in that crew roles during emergency situations were not clearly defined. Also, feedback by both training and operations departments and other oversight groups during preparatory evaluations had been ineffective. It was noteworthy that these factors were also NRC concerns at Unit 1 in the same functional area during the previous assessment period.

Three of the six reactor scrams were attributed to personnel error. An operator used a walkie-talkie near the radio transmission sensitive EHC cabinets causing turbine control valves to close and an automatic reactor scram. An inadequate plant impact assessment for preventive maintenance on a condenser air removal pump breaker resulted in a loss of condenser vacuum and an automatic reactor scram. During a controlled plant shutdown, an automatic reactor scram occurred due to poor control of steam loads. These scrams could have been prevented by more care and attention being paid to the impact of the operator action on the unit.

Several personnel errors resulted in poor control of components and systems. The most severe was when valves in the reactor water cleanup system were left out of their normal position, resulting in an uncontrolled discharge of reactor coolant to the liquid waste processing system. Also, a service water bay unit cooler with a known deficiency was improperly returned to service without repairs completed. A Division III switchgear room cooler was declared operable following maintenance, even though it was not energized and no post-maintenance test had been performed. An inadequate plant impact assessment for the tagging of the generator hydrogen system resulted in the unexpected loss of hydrogen pressure indication in the control room and a plant shutdown. Collectively, these errors indicated continuing problems with operator attention to detail and poor planning, as identified in the previous SALP.

Notwithstanding the above problems, Unit 2 operators displayed an overall conscientious attitude towards safety, licensed training, and the resolution of concerns brought to their attention by NRC. This safety perspective and improved problem identification was demonstrated on several occasions. While closely monitoring containment pressure indications during a routine evolution, a control room operator identified that suppression pool/drywell vacuum breakers were improperly set. Operator responses to a recirculation pump trip at 88% reactor power demonstrated their ability to quickly assess the event and carry out appropriate emergency response actions. During a surveillance test, the questioning attitude of an operator identified an incorrect leak test methodology for diesel generator air start system check valves.

Limited progress was made in reducing the large number of lit annunciators in the control room. Towards the end of the assessment period an engineering task force manager was assigned, and better progress tracking methods were established. In the related area of operator responsiveness to alarms, improvement was noted and operators routinely responded to alarms in a timely manner. This improved responsiveness appeared to have resulted in part from an increase in operations department management presence in the control room and involvement in daily activities. This increased management attention to assure effective corrective action was observed in other areas.

Niagara Mohawk adequately implemented the requested actions of NRC Bulletin 88-07 and Supplement 1, regarding potential power oscillations. However, the following inadequacies were noted: a revised procedure included an entry condition that was not understood by all licensed operators; the interviewed operators did not fully understand the recent procedure revision; and several procedures did not contain appropriate cautions. It appeared that the Niagara Mohawk verification process was insufficient to ensure that licensed operators understand procedure changes and the procedure review process was not comprehensive. Later, when an unexpected downshift of a reactor recirculation pump resulted in the reactor operating in the restricted area of the power-to-flow map, the operators acted promptly and correctly to manually scram the reactor.

Many meaningful initiatives were implemented to improve the operations department, but frequently had not been in place long enough to demonstrate results. Examples included establishing and filling a new Deputy Station Superintendent position to provide increased management oversight of plant activities and operator training; improved departmental goals for performance; operator incentive programs based on operational performance; installation of annunciator response cards on the front and rear control panels; revised, detailed auxiliary operator round sheets; computerized tagging system; relocation of the tagging control desk to the rear of the control room to minimize congestion and noise in the control panel area; plant labeling improvements; and video surveillance systems used to monitor inside high radiation areas. These initiatives demonstrated management's desire to improve the control room environment, as well as, overall performance.

Staffing in the operations department was adequate; however, licensed operator career development alternatives and rotational assignments were limited by the lack of extra licensed staff. Because of the requalification training program concerns and normal attrition, the shift crew rotation was reduced to five crews, each with two SROs. Fourteen licensed operator candidates (seven ROs and seven SROs) were in the training program at the end of the assessment period. Operations management appeared responsive to staffing concerns.

Summary

The Unit 2 operations performance was inconsistent and showed limited improvement over the previous assessment period. Operational events caused by poor control of components and systems continued at a high rate. The Unit 2 licensed operator requalification program was rated unsatisfactory, based on the poor performance of operators. Progress on lit annunciator reduction was slow. Meaningful initiatives were established but had yet to demonstrate results.

III.A.2.b Performance Rating

Category 3

III.A.2.c Recommendations

None

### III.B Radiological Controls

The previous SALP report rated Radiological Controls as Category 2. There was steady improvement in the overall program but radiation protection (RP) management oversight was weak. However, Niagara Mohawk initiatives were expected to improve the accountability and oversight of ongoing work. The SALP Board recommended that Niagara Mohawk place more emphasis on Unit 1 decontamination.

In this assessment period the RP area was reviewed during the IATI, and rad-waste/transportation and environmental/effluent controls were each reviewed once.

#### III.B.1 Analysis

##### Radiation Protection

Overall, during this assessment period, radiation protection performance remained acceptable, with limited progress in reducing contaminated areas, upgrading ALARA (as low as reasonably achievable) performance, and oversight of ongoing work. The Restart Action Plan (RAP), an overall Niagara Mohawk assessment of management problems associated with the 1988 shutdown of Unit 1, appeared to result in increased attention to improving radiation protection programs.

The control of ongoing work improved. Walk-around audits by management and teams of first line supervisors resulted in improved adherence to radiological controls practices. Management involvement and control in assuring quality in RP programs improved. Also, audits by the corporate RP group and contractor audits sponsored by the Safety Review and Audit Board (SRAB) improved and became effective in assessing program weaknesses. Management emphasis of problem identification had improved this area, but resolution of the identified problems lagged at times.

The control of contamination and radiation improved. For example, the RP department initiated a structured analysis of the recurrent problem of unlocked high radiation area doors and other recurring site RP problems, as well as industry events. This resulted in better resolution of RP issues. For example, manual contamination friskers were replaced with modern automated equipment. Decontamination of the turbine and reactor buildings reduced the number of personnel contamination events and improved the access to equipment. The control of hot particles on the refueling floor was upgraded. Although there were improvements, some resolutions did not fully address the root cause of the problem. For example, there did not appear to be an effort to upgrade valve packings and to use live loading on valves at Unit 1, thereby addressing the source of low level contamination in some plant areas. Also, the major decontamination of Unit 1 reactor systems was postponed.

Staffing and organization were strong. The staffing level was expanded last period by the addition of a chief technician position to improve control of field work. Since then the staffing level remained stable. Most personnel had many years of service onsite. All supervisory positions were filled with Niagara Mohawk employees, except for the superintendent, chemistry and radiation protection. Also, a new, highly experienced individual was hired midway through the period to fill the ALARA supervisor position vacated last period.

ALARA performance was weak and needed more visible support of upper management. Management improved the use of goals as a tool to focus personnel and equipment changes towards achieving specific objectives, but there were no management goals clearly reflecting the need for site-wide support of RP programs. Also, the relationship between the RP department goals and the broader station and corporate goals was often not clear. For example, there was no 1989 corporate ALARA goal. This could have diminished the priority of RP related improvements. The Unit 1 goal of about 800 man-rem did not represent an aggressive attempt to reduce exposure. In addition, although the final determination had not been made, it appeared that this goal had been exceeded. It also appeared that little effort was made to reduce the source term and to adjust the major planning of work to ensure the goal would be met. Reasonable efforts appeared to have been made during the work performance to reduce exposure. In response to NRC concerns, management established a 1990 corporate ALARA goal of 506 man-rem.

The problem concerning the radwaste processing building subbasement being used for liquid radwaste storage was brought to the attention of the NRC during this SALP period; however, the event occurred several years ago with weak corrective actions initially taken to achieve a timely cleanup. The more recent Niagara Mohawk actions have demonstrated good management oversight and provided for a deliberate, cautious, and well supervised cleanup of this area.

#### Effluent, Environmental Monitoring, Radwaste and Transportation

Niagara Mohawk had continual problems with the operability of effluent monitors, especially at Unit 2, and corrective actions were not effective. For example, the gaseous effluent monitoring system (GEMS) remained inoperable during most of the assessment period, placing Niagara Mohawk in an almost continuous Limiting Condition for Operation. Niagara Mohawk also failed to take timely action in the repair of some effluent systems. For example, at Unit 1, the service water effluent radiation monitor was declared inoperable for five months before Niagara Mohawk placed the required modification to this system on its repair and maintenance schedule. This programmatic weakness was further evidenced by the five Licensee Event Reports (LERs) related to the effluent monitoring systems issued during the assessment period.

In contrast to the above effluent monitor problems, Niagara Mohawk continued to have strong radwaste and environmental monitoring programs. Niagara Mohawk continued to operate an extensive surveillance system for the collection and analysis of environmental samples and for verification of the meteorological instrumentation. All radwaste shipments were accepted at the low level burial sites without incident. Staffing within these areas remained stable, and the training program for radwaste workers continued to be a strength.

Radioactive waste operations were effectively controlled, except for one minor event in which improper annunciator response resulted in the overflow of the reactor building sump. Radwaste management was proactive in the effort to minimize and segregate radioactive waste and was observed to be actively involved in day-to-day activities in the plant.

The quality assurance (QA) program continued to be effectively implemented, through the use of audits, surveillances and quality control (QC), although the review of the effluent monitoring systems was an exception. Findings identified in audit reports and surveillances were typically resolved in a timely manner for these areas.

#### Summary

Overall performance remained good. Improvements were made in the reduction of contaminated areas, the control of ongoing work, and the ALARA control of work. However, upper management support of ALARA appeared to be weak. Niagara Mohawk continued to have problems with the operability of the effluent monitoring systems, especially at Unit 2, but radwaste and environmental monitoring programs remained strong.

#### III.B.2 Performance Rating

Category 2

#### III.B.3 Recommendations

None

### III.C Maintenance and Surveillance

The previous SALP report rated Maintenance and Surveillance as Category 3. The site maintenance program was assessed to be effective; however, weaknesses were noted in management oversight of performance, effectiveness of corrective actions, and adequacy and compliance with maintenance procedures. Improvement was noted in the Unit 1 inservice inspection (ISI) program. Various procedural and personnel deficiencies were experienced during the implementation of the Unit 2 surveillance program. While ISI and inservice testing (IST) activities are reviewed in this functional area, the ISI and IST programs are assessed in the functional area of Engineering/Technical Support.

#### III.C.1 Analysis

##### Maintenance

Overall, during this assessment period, performance in the maintenance area was again weak. The inadequate control of maintenance activities, particularly at Unit 2, resulted in a high number of operational events. Weaknesses were noted in the areas of backlog reduction at Unit 2, proper diagnosis of equipment failures at both units, and unplanned shutdowns at Unit 2.

Numerous operational events at Unit 2 resulted from errors by maintenance personnel. These personnel errors resulted in a Technical Specification (TS) violation of electrical Division III operability requirements, a flooding event on the 250 foot elevation of the turbine building, numerous inadvertent safety system actuations, and an inadvertent traversing incore probe insertion. The majority of these errors were made during routine preventive maintenance. The causes of these errors were rooted in weak procedural adherence, poor procedure format, inadequate post-maintenance testing, poor plant impact assessments, and insufficient supervisory oversight. Some of the corrective actions taken by management included requiring the use of a plant impact sheet and a post-maintenance test sheet for each work package. As a long term measure, station maintenance procedures were being upgraded to include more concise procedural controls. These corrective actions appeared to be an appropriate approach.

Three unplanned outages at Unit 2 were maintenance related, and the absence of effective preventive and corrective maintenance was often involved. Poor procedural guidance on electrical preventive maintenance performed on a mechanical vacuum pump breaker directly caused a reactor scram. Inadequate preventive maintenance on loose wires in the main generator potential transformer cubicle caused a reactor scram. A forced outage resulted from inadequate troubleshooting on repetitive feedwater pump problems involving excessive vibrations and mechanical seal failures. These equipment problems resulted in unnecessary plant transients and protective system challenges. As demonstrated by the



above events, the maintenance department did not effectively maintain plant equipment to support reactor operation. Also, two valve packing leaks in the drywell, and a power supply failure in the recirculation pump control circuitry caused unplanned outages. The packing leaks and the power supply failure appeared to be random equipment failures without direct, adverse implications on the maintenance program. Nonetheless, these events were circumstantial evidence of weak maintenance.

With the Unit 1 reactor shutdown, a reactor scram was caused by the failure to properly plan a maintenance activity. Also, several events indicated the need to improve the timeliness and effectiveness of corrective actions, e.g., poor initial troubleshooting on problems related to a motor-generator set (which resulted in several reactor scrams and emergency ventilation initiations), lengthy troubleshooting of stroke time problems with a control valve for control room ventilation, and poor troubleshooting and repair of an emergency diesel generator (EDG) fuel transfer pump.

In the Special Team Inspection early in the assessment period, the NRC noted that to the extent that the maintenance program was effective, it depended largely on the skill and experience of the maintenance management and personnel and not on an established maintenance program. Accordingly, the team noted that the program appeared to be informal in some areas with a considerable risk of degradation if any of the key managers were to depart. Limited progress was made in establishing these programmatic aspects before the station maintenance superintendent chose another non-nuclear Niagara Mohawk job near the middle of the period. This loss of experience combined with the weak program, appeared to contribute to the above problems.

Later in the assessment period the IATI noted a strong and knowledgeable maintenance planning organization that scheduled all facets of the work activities. The IATI also noted that Niagara Mohawk management had implemented performance indicators and a new method for prioritizing work requests to ensure completion on a timely basis, especially for those work requests required to support reload and restart efforts at Unit 1. Realistic goals were set at Unit 1 for the reduction of the backlog of work requests and at the conclusion of this SALP period this goal had been achieved. However, the maintenance work request backlog at Unit 2 remained large and was not effectively addressed by station or corporate management. Work practices observed in the field by the IATI were generally carried out in a competent fashion. Good procedural adherence and teamwork was also noted by the IATI.

In an effort to improve the quality of the various maintenance procedures, a maintenance support group with a staff of 38 procedure writers was formed. This was a good example of management committing the necessary resources to achieve procedural and program improvements. Also, following NRC identification of problems with the post-maintenance testing (PMT) controls at Unit 2, Niagara Mohawk identified and addressed similar PMT deficiencies at Unit 1, another example of effective corrective action.

Some maintenance activities were well controlled. For example, the Unit 2 feedwater pump repairs were well controlled once the design problem was determined, and supervisory oversight of the repairs was evident.

However, several events called into question maintenance management efforts to improve oversight of day-to-day performance, as well as, effectiveness and timeliness of corrective actions. For example, maintenance management was largely responsible for the poor implementation of the initial set of reload system walkdowns at Unit 1. NRC identified numerous deficiencies in the walkdowns, which demonstrated poor preparation and oversight of the walkdowns by maintenance management and unit management. Also, Niagara Mohawk investigation of the Unit 1 reload SRM bypass incident was ineffective, in that it did not determine that electrical and I&C maintenance personnel had not adhered to tagging procedures while performing troubleshooting and repairs. Further, when brought to the attention of maintenance management, initial corrective actions were ineffective.

Improper diagnoses of equipment failures and repetitive failures again occurred at Unit 2 this assessment period. Examples included: hydraulic control unit nitrogen leakage; reactor core isolation cooling system aftercooler temperature monitor failures; standby gas treatment system isolation valve actuator problems; feedwater pump vibration and mechanical seal failures; and reactor water cleanup pump seal failures. These examples indicated poor root cause determinations of equipment failures.

In conclusion, regarding maintenance, although progress was made in some areas, the overall performance in maintenance did not improve. The quality of maintenance procedures improved, work was better prioritized, and the backlog of Unit 1 work requests was reduced. However, the number of maintenance-related scrams, safety system actuations, and unplanned outages at Unit 2 demonstrated that maintenance program was not fully effective. The maintenance program did not appear to analyze, plan, and execute the maintenance work in an effective manner to support the operation of Unit 2 and the repair and testing at Unit 1. Management was often not timely and effective regarding corrective actions and investigations of equipment and personnel problems. Maintenance department staffing appeared to be marginally acceptable based upon the inability to reduce the backlog at Unit 2.

### Surveillance

Overall, during this assessment period, the surveillance area improved, most notably at Unit 2 compared to the minimally acceptable level of the previous period. The thorough review of Technical Specification (TS) requirements, previously done at Unit 2, was duplicated at Unit 1 and provided a basis for better planning and execution of the testing.

A major concern identified at Unit 1 near the end of the last period was that frequently performed surveillance tests were not followed step by step and that attached checklists were being used without reference to their written procedure. As corrective action, Niagara Mohawk provided site-wide training on proper procedural conduct with emphasis on strict adherence. This appeared to have been effective as evidenced by the large number of procedural changes initiated at both units to correct procedures, more tests stopped due to procedural concerns, and few instances of events related to poor procedural adherence.

One of the Unit 1 Restart Action Plan (RAP) commitments was to develop and implement a Unit 1 TS matrix for the purpose of tracking and scheduling TS required surveillances. Extensive development efforts by the regulatory compliance group took place this period, and substantial progress was made. This type of computer-based TS matrix had been developed and successfully implemented at Unit 2 during the previous assessment period.

An adjunct to the Unit 1 TS matrix program was the performance of technical reviews of the surveillance procedures themselves. At the end of the period, 100% of the procedures had been reviewed, and final compilation and evaluation of the results were under way. Niagara Mohawk's decision to perform a 100% review of existing surveillance procedures was justified by the fact that numerous minor deficiencies were identified and corrected as a result of this review. A few examples of inadequate test methodology were identified by Niagara Mohawk and other outside organizations. Overall, the test methodology and format for the resulting surveillance procedures were good. These two programs were comprehensive in nature and properly addressed previous deficiencies.

One area of concern at Unit 1 was the instrumentation calibration program for safety-related equipment. The NRC identified the failure to incorporate the emergency ventilation system 1 KW heater thermostat units in the calibration program. Concurrent review by Niagara Mohawk of the balance of plant and Technical Specification equipment instrumentation identified several other calibration deficiencies.

There was marked improvement in the performance of surveillance testing at Unit 2, particularly of the TS-required tests. There was only one inadvertent safety system actuation caused by personnel error while performing surveillance tests. Site-wide training was administered on procedural adherence, and surveillance test plant impact statements were greatly enhanced. During one unplanned outage, the maintenance organization took advantage of the available down time and successfully scheduled and completed 38 local leak rate tests. Local leak rate testing crews were formed using dedicated personnel from various crafts and departments. This approach proved to be successful and demonstrated effective teamwork.

The scheduling of Unit 2 surveillance tests improved, and missed surveillance tests were greatly reduced. Some minor surveillance test implementation problems occurred resulting in TS violations of minimal significance. A missed surveillance test occurred as a result of an operations shift check oversight, and another missed surveillance occurred as a result of a chemistry department oversight. In each case, appropriate corrective action was taken. Increased management oversight of the surveillance program was evident. Performance this period indicated that the corrective actions taken in response to the large number of missed surveillance tests during the previous assessment period were effective.

Both the Unit 1 and Unit 2 ISI programs were effectively implemented. The previously addressed ISI and IST areas demonstrated continued good testing performance.

In conclusion, regarding surveillance, good progress occurred in the surveillance area, and thorough, extensive reviews of testing formed the basis for better planning and implementation of Technical Specification testing, inservice testing, and inservice inspection. Implementation of the surveillance testing program at Unit 1 was effective. The Unit 2 Technical Specification surveillance program showed substantial improvement over the last assessment period. Increased management oversight of the program was evident.

### Summary

Performance improved notably in surveillance; the Technical Specification testing programs were effective, and the previous improvements in inservice inspection and inservice testing continued. However, an ineffective maintenance program appeared to result in numerous maintenance-related operational events at Unit 2.

### III.C.2 Performance Rating

Category 3

### III.C.3 Recommendations

- |                 |  |
|-----------------|--|
| NRC:            | Perform a team inspection to assess maintenance performance during the Unit 2 refueling outage.                                    |
| Niagara Mohawk: | Reassess the adequacy of the maintenance program and management/supervisory oversight with respect to the continuing deficiencies. |

### III.D Emergency Preparedness

The previous SALP report rated Emergency Preparedness as Category 1, based on good Niagara Mohawk performance during the partial-participation exercise, good working relationships with State and local agencies, and progress in addressing items from the NRC emergency response facilities (ERFs) appraisal.

During the current assessment period, NRC review included observation of a full participation exercise, a routine safety inspection, and review of changes to the emergency plan and implementing procedures.

#### III.D.1 Analysis

Overall, during this assessment period, Niagara Mohawk continued the good performance in Emergency Preparedness. Performance during the emergency exercise was good, the good working relationships with State and local authorities were maintained, and effective corrective actions were taken for problems.

During the emergency exercise, good performance was noted in response to the accident scenario. Changes in plant conditions were readily observed by shift staff and used to classify emergency conditions properly. Positive interactions were demonstrated among emergency response organization (ERO) members, and effective coordination with State and local response personnel was observed. Interface with the NRC incident response team was effective. No performance weaknesses were identified, and only minor improvement areas were noted. Previously identified items were corrected and no items recurred.

The routine safety inspection examined all areas of the emergency preparedness (EP) program, including administration, EP and ERO staffing, ERFs and equipment, program changes, training, and independent audits. ERFs were maintained in a state of readiness, and the Site Emergency Plan (SEP) and implementing procedures were current. Procedure and program changes received the proper level of management review.

Site management was kept apprised of EP program activities through formal staff meetings and involvement in the routine activities of the EP staff. Senior managers maintained ERO position qualification, evaluated SEP and implementing procedure changes, participated in drills and exercises, and interfaced with Oswego County officials. Management attention to site activities was supportive, and management demonstrated a clear understanding of the issues.

The EP program was administered by the manager, emergency preparedness, who was responsible for all onsite and offsite activities. To implement all aspects of the program, nine full time technical and administrative positions were authorized. All positions were described and responsibilities were well defined. Personnel changes in the last calendar quarter of 1989 resulted in replacement of the manager, EP and two additional vacancies. Although this put a temporary

strain on existing EP staff, the major program functions were being adequately maintained, including maintenance of the SEP and implementing procedures, conduct of drills and exercises, maintaining emergency response facilities and equipment, and interfacing with offsite support groups. Good coordination existed among other site departments as personnel were drawn from operations and training staffs to aid in development of drill and exercise scenarios. Niagara Mohawk was actively working to fill vacancies with qualified candidates.

Emergency response training was performed by the training department and was generally effective. This included general employee training as well as qualifying individual members of the ERO to perform response functions. A training manual described the course requirements, training matrix, lesson plans, and course contents. The ERO was fully staffed and trained in key response functions. Improvements were made in the system for immediate notifications of ERO personnel. Following implementation of this new system, NRC walk-through scenarios revealed that training of shift personnel on the revised procedure had not been effective in all cases, and retraining was performed. Manual records of individual training were complete, and tracking of permanent records and all ERO requalifications was upgraded via computer database files.

Niagara Mohawk maintained the good working relationships with the local communities, the State of New York, and the FitzPatrick site staff in coordinating offsite emergency response activities. Following the full participation exercise, the Federal Emergency Management Agency (FEMA) identified several deficiencies regarding offsite preparedness, which concerned development of Emergency Broadcast System (EBS) messages, notification of hearing impaired persons, and training of offsite emergency workers. To address these findings, Niagara Mohawk worked closely and effectively with New York and Oswego County and resolved all deficiencies in a Niagara Mohawk supported remedial drill held in November 1989.

Niagara Mohawk showed a good ability to resolve technical issues. In response to NRC inspection findings, implementing procedures were issued via controlled distribution. Revisions were made in the areas of protective action recommendations for Emergency Directors and clarification of emergency action levels for fire related events. These corrective actions were effective, in that there was no repetition of these findings. Also, to address problems associated with obtaining and evaluating chemistry samples, an appropriate action plan was developed.

Niagara Mohawk audits met the requirements of 10 CFR 50.54(t), and a good understanding of EP program areas was exhibited by audit team members. Audits were adequate in scope, and corrective actions on recommendations identified during audits and self-assessments were timely.

Summary

Niagara Mohawk continued to implement an effective emergency preparedness program. Niagara Mohawk demonstrated good performance during the emergency exercise, good working relationships with State and local authorities, and effective corrective actions to identified problems. Personnel changes among EP staff did not appear to impact overall program implementation, and the training program was generally effective. An effective effort was provided in assisting the State of New York and Oswego County in resolving FEMA-identified exercise deficiencies.

III.D.2 Performance Rating

Category 1

III.D.3 Recommendations

None

### III.E Security

The previous SALP report rated Security as Category 1. This rating was based upon Niagara Mohawk's implementation of an effective security program, which exceeded regulatory requirements and NRC-approved security plan commitments. The good performance was further demonstrated by Niagara Mohawk's initiatives to improve the program and to upgrade security systems.

During this assessment period, two routine, unannounced physical security inspections were conducted by region-based inspectors.

#### III.E.1 Analysis

Overall, Niagara Mohawk's high level of performance during the previous assessment period continued throughout this period. The performance of security personnel was excellent, and improvements were made to the security program, training, and equipment.

Upgrading and enhancements of systems and equipment continued. In particular, some aging intrusion detection equipment was replaced, and several assessment aids and security facilities were upgraded. In addition, facilities, such as the access control centers and security office buildings, were very clean and well maintained. The security organization was also assigned additional maintenance assistance, such that the maintenance staff was comprised of a full-time I&C staff consisting of three supervisors and fifteen technicians, three door hardware specialists, three engineers, and one planner. These technicians and specialists were instrumental in maintaining properly functioning and effective security systems and equipment. Repair of security equipment was generally accomplished within hours, and the repairs were effectively prioritized by the security supervisor. Planning and installation of system upgrades were effective, appropriately controlled and well thought-out.

Plant and corporate management continued to be actively involved in security matters as evidenced by excellent support for and cooperation with the security program upgrades and enhancements. Plant and corporate security management personnel also remained active in committees and organizations engaged in nuclear plant security matters. This involvement indicated interest in the program and support from upper level management.

The security manager and his staff were well trained and qualified security professionals with an excellent understanding of nuclear plant security objectives. It was also evident that the security supervisors had been delegated the necessary authority and discretion to ensure that the program was being carried out effectively and in compliance with NRC regulations.



The NRC-required annual audit of the security program was performed by Niagara Mohawk's Safety Review and Audit Board, augmented by security supervisors from other nuclear power plants. The audit was comprehensive in scope and depth. Niagara Mohawk continued to conduct self-assessments of the security program utilizing experienced plant security supervisory personnel and consultants. Corrective actions on findings and recommendations identified during the audit and the self-assessments were prompt and effective, with adequate follow-up to ensure their proper implementation. The NRC continued to believe that the self-assessment program that Niagara Mohawk established has been a major contributing factor in Niagara Mohawk's excellent enforcement history and performance.

A review of Niagara Mohawk's security event reports and reporting procedures found them to be well understood by security supervisors and consistent with NRC regulations. One event requiring a prompt report occurred, involving an unescorted visitor in the protected area. Niagara Mohawk took prompt and appropriate compensatory action and followed-up with effective corrective measures to prevent recurrence.

The security training program was administered by a highly qualified, full-time staff. The program was consistent with and exceeded the requirements of the NRC-approved Security Force Training and Qualification Plan. Security personnel were provided with a modern and well maintained physical fitness room, a simulator for training alarm station operators, and state-of-the-art training aids for hands-on training with excellent lesson plans. Security management also instituted an aggressive tactical training program for the armed security force members. In general, security force members were very knowledgeable of their post duties, procedures, and overall responsibilities.

The Security, Contingency and Training and Qualification Plans were reviewed, and no changes were noted that could have resulted in a degradation of Niagara Mohawk commitments.

### Summary

Niagara Mohawk continued to maintain a very effective and performance-oriented program, and the security personnel performed up to the established high standards. The efforts to upgrade the operation and reliability of security systems were commendable and demonstrated Niagara Mohawk's commitment to maintaining a very effective and high quality program. The security training program was effective, very well administered, and continually improved. Management support was clearly evident in all areas of the day-to-day security operations and in the planning for upgrades and enhancements.

### III.E.2 Performance Rating

Category 1

### III.E.3 Recommendations

None

### III.F Engineering and Technical Support

The previous SALP report rated Engineering and Technical Support as Category 3. There had been limited progress in resolving previous problems in the following areas: poor engineering management oversight of contractors; inconsistent performance by the engineering staff; slow resolution of design deficiencies; and significant deficiencies in the implementation of the training program.

#### III.F.1. Analysis

Overall, during this assessment period, Niagara Mohawk improved the overall quality of engineering work, both design work and plant support activities. The engineering staff resolved the previously identified design issues in an acceptable manner and improved the engineering support at the sites by introducing system engineers and increasing the site engineering group staff. Some engineering work needed improvement in quality or timeliness, including longer term initiatives. Control of contractors improved.

Niagara Mohawk management demonstrated a determination to improve their performance with the following: a program to address and resolve the underlying root causes of identified management deficiencies before the restart of Unit 1; a program to integrate and coordinate engineering activities; a multi-year program to recover and reconstitute the Unit 1 design basis; and a budget with significant resources for implementation of the above programs.

Several 125 vdc system design deficiencies had been identified by Niagara Mohawk during the previous SALP period. Initially, the resolution of these deficiencies was slow due to ineffective management attention. However, the technical deficiencies were effectively resolved when appropriate management attention was provided. Niagara Mohawk assigned a task force to coordinate the necessary engineering disciplines. The establishment of a task force appeared to be effective in resolving this issue and other Unit 1 issues.

Notable improvements were observed in design change activities. A number of corporate engineering activities and projects were conducted in a professional manner, but some weaknesses in other efforts were reflective of poor engineering support. Examples of good engineering work included the establishment of IST and ISI task forces to support all activities required to implement the 10 year interval of these programs; effective implementation of a program to resolve structural integrity concerns in the Unit 1 large bore pipe supports; a thorough evaluation of engineering analysis of the Unit 2 modification to inhibit the feedwater runback signal from the reactor recirculation controls system; and thorough evaluations of the Unit 1 fuel zone level common tap issue and the issue of average power range monitor (APRM) flow bias circuit isolation from computer circuits. Additionally, numerous specific design issues at Unit 1 were resolved in a thorough, acceptable manner.

However, poor performance in other areas demonstrated inconsistency in the ability of the corporate engineering staff to deliver quality work. Examples of these included: Site Operations Review Committee (SORC) rejection of a Unit 1 emergency ventilation design modification due to poor engineering conceptual design review, inadequate independent design review and lack of proper engineering coordination; inadequate initial engineering justification for continued use of Satin American trip coils for circuit breakers at Unit 1; inadequate review to establish harsh environmental qualification for several splice assemblies at Unit 1; and relief requests for Unit 1 ISI programs submitted to NRC in piecemeal fashion with poor justification for some requests. In these examples of poor performance, engineering management involvement appeared to have been less than the management involvement in the examples of better work.

The previous SALP identified problems with implementation of the training program for the nuclear engineering and licensing staff. The original program, which was established in late 1986, was not implemented due to insufficient classroom space and a shortage of instructors. In response to specific weaknesses identified by the NRC and Niagara Mohawk QA, specific training for nuclear engineering and licensing personnel was begun by Niagara Mohawk in March 1989. The program covered 13 specific areas selected by Niagara Mohawk based on experience and industry guidelines and was planned for completion in March 1990. Following this training, a broader based training program was planned for 1990 and beyond. Overall, Niagara Mohawk made progress in providing the needed training for the engineering staff. However, additional management attention is needed to assure timely implementation of the full scope of the training program.

To enhance plant safety and provide better direct plant support, Niagara Mohawk established the Integrated Priority System (IPS) with six levels of priorities. The IPS applied to planned work in the nuclear division and support organizations. All safety significant projects are Priority 1, and other work projects which affect safety systems are Priority 2. The effectiveness of the system was evidenced by the fact that all Priority 1 and 2 projects were on schedule and were reviewed on a weekly basis. The system for assigning priorities to plant modifications appeared to have the proper safety perspective.

Niagara Mohawk introduced system engineering groups to both units and approved additional positions in the site engineering group. These additional engineering resources improved the support of the plants and provided a closer working relationship between the engineering and operations personnel. Also, improved communications between engineering at Salina Meadows and onsite engineering was established by the presence of site engineering managers in the daily status meeting and telephone conference calls to discuss the plant status and design modifications. Examples of this improved support included good engineering work on the Unit 2 main feedwater pump repairs, Unit 2 circulating water system modifications, and Unit 1 core spray system testing.

However, in some instances, these site engineering resources were not effective. Specifically, Unit 2 circulating water system modifications were improperly initiated prior to completion of the safety evaluations, and modifications to the EHC system introduced a ground, which was later implicated in an EHC malfunction and subsequent reactor scram. Also, these engineering groups were slow in addressing problems regarding poor isolation valves for acid addition to Unit 2 circulating water and resolution of long standing temporary modifications. The acid addition valves resulted in an unplanned shutdown due high copper concentrations in the circulating water system.

Engineering management improved oversight of contractors. The offsite engineering group at Salina Meadows relied heavily on contractor personnel to support the engineering work; more than 50% of the engineering staff was from various contractor organizations, provided on an as needed basis. Based on the generally acceptable quality of the work, it appeared that these personnel had been properly supervised. Further, site engineering management assumed more responsibility for the control of contractors at the site, as evidenced by the well structured and well executed ISI, IST, and commercial grade equipment dedication programs.

The licensing group's understanding and interpretations of Technical Specifications (TS) were generally sound and conservative. However, one TS interpretation involving the Unit 2 high pressure core spray keep fill system was judged to be nonconservative by NRC and operations management, and subsequently was not used by operations.

### Summary

Engineering and technical support performance generally improved. Much good engineering work occurred, but some engineering work needed improvement in timeliness and quality. Those technical issues which received increased management oversight were generally resolved more expeditiously and were of better quality than issues without such management involvement.

### III.F.2 Performance Rating

Category 2

### III.F.3 Recommendations

None

### III.G Safety Assessment/Quality Verification

During the previous assessment period, Niagara Mohawk performance in the area of Safety Assessment and Quality Verification was observed to be inconsistent. This functional area was rated Category 3 with an improving trend. Numerous strengths and weaknesses were noted, including identified leadership deficiencies had begun to be corrected, problem identification was better, and event evaluations were more thorough, but responsibilities remained poorly defined, corrective actions were weak, and review of industry operating experience was inadequate. The SALP Board cautioned Niagara Mohawk to ensure that increased emphasis on Unit 1 did not result in insufficient attention to problems at Unit 2.

#### III.G.a. Analysis

Overall, during this assessment period, there was a better approach to assuring quality, but limited progress was demonstrated in producing consistent, good results. In general, the Niagara Mohawk programs to improve overall performance, embodied in the Restart Action Plan and Nuclear Improvement Plan, appeared to be comprehensive, and both conceptually and functionally adequate. This was evidenced by the success, although sometimes marginal, of the programs established to address the five underlying root causes.

Significant efforts were expended to upgrade the Niagara Mohawk approach to assuring the quality of operations. This effort was guided by the Restart Action Plan (RAP), which had analyzed the previous management deficiencies and determined the underlying root causes (URCs). As part of the RAP, new standards of performance for Niagara Mohawk management and working level personnel were established. Considerable evidence was found during this assessment period that Niagara Mohawk was striving to conduct its activities in accordance with the revised standards. Specifically, the implementation of the RAP was evaluated by the NRC's IATI midway through the rating period. The team concluded that there were no fundamental flaws in the RAP. Clear improvement was noted in three of the five underlying root causes of past management deficiencies. These three URCs were goal setting, organizational culture, and team work. Performance in the URCs of problem solving and standards of performance/self-assessment was weak, but showed some signs of improvement.

Performance in the functional areas of Security and Emergency Preparedness continued to be at the established high levels. Further, Niagara Mohawk demonstrated some progress in improving overall performance in the remaining functional areas. Many new initiatives and programs met with success or demonstrated a commitment to long term improvement. For example: the inservice inspection and inservice testing programs at both units; the large bore pipe support examination at Unit 1; improvements in Unit 1 operator EOP knowledge and usage; the development of computer-based TS surveillance matrices at both units; a detailed surveillance test review at Unit 1; and the staffing of systems engineers at both units.

In addition, there were instances of behaviors or actions which demonstrated Niagara Mohawk's implementation of the enhanced standards of performance. For instance, a Unit 2 station shift supervisor (SSS) was observed declining to implement a temporary modification for which no safety evaluation had been done. A decision was made to replace all of the Satin America Corporation circuit breakers prior to reload rather than place reliance on a justification for operation. Also, operators appropriately displayed a questioning attitude and identified several surveillance tests that needed improvement. Further, Niagara Mohawk identified a design error in the Unit 2 service water actuation logic and proceeded cautiously in the evaluation and resolution of the error.

In contrast to the above examples of improved performance, numerous events reflected continued poor performance, and some new initiatives were poorly implemented. For example: unsatisfactory Unit 1 initial reload systems walk-down procedure implementation; poor progress in reducing the numerous Unit 2 control room annunciators; numerous maintenance related events at Unit 2; poor performance on Unit 2 requalification examinations; slow resolution of 125 VDC system concerns at Unit 1; and unsatisfactory progress in reducing the large number of inoperable effluent and process radiation monitoring systems at both units. These examples of good and bad performance demonstrated the inconsistency in overall performance and the broad range of recent gains and continued performance concerns. However, an overall improving trend was noted.

Niagara Mohawk's Nuclear Division management staff was relatively unchanged. Two significant changes later in the period were the addition of a Unit 2 deputy station superintendent and a new director of regulatory compliance. The addition of a deputy station superintendent at Unit 2 was viewed as a positive step to more effectively deal with the numerous technical and personnel related issues at Unit 2 and to provide more direct, senior line management oversight. Increased staffing on the Unit 1 operations events assessment group and Unit 2 independent safety engineering group reflected a Niagara Mohawk commitment to reduce the industry events review backlog and become more proactive. Similarly, the development of the independent assessment group, reporting to the Executive Vice President, reflected a Niagara Mohawk commitment to improve self-assessments. The overall effectiveness of these recent changes could not be measured during this SALP period, but demonstrated good initiatives to improve station performance.

The onsite regulatory compliance group continued to be an asset to the day-to-day administration of operation of the station. Licensee Event Reports and Special Reports processed by this group were generally well written and timely. The Nuclear Commitment Tracking System managed by the group appeared to function properly. A new initiative under the cognizance of regulatory compliance was the Unit 1 Technical Specification (TS) Surveillance Matrix Program. This new program appeared to have gotten started well, with TS preparation for core reload in January 1990 properly verified.

Licensing issues were evaluated with varying degrees of effectiveness for different issues. The engineering and licensing organizations appeared to have difficulty in addressing needs beyond those necessary to support Unit 1 restart and the upcoming Unit 2 refueling outage. This was apparent from the extensions to complete the responses to NRC generic letters, on issues such as the hardened wet well vent, several TMI action item related Technical Specification changes, the instrument air system for Unit 1, and Technical Specification operational mode changes on Unit 2. On the other hand, Niagara Mohawk provided virtually all license amendment submittals to the staff sufficiently in advance of the requested action to allow a timely staff review. Niagara Mohawk generally provided advance notice to the NRC staff of expected schedule delays and their basis. Submittals ranged from marginal to detailed and thorough, also indicative of occasionally strained resources or insufficient management oversight.

Onsite (Site Operations Review Committee) and offsite (Safety Audit and Review Board) review committees have provided adequate oversight of licensed activities. The efficiency of the SORC and SRAB meetings appeared to be improving with better planning and preparation by the committee members and support staffs, although the SORC occasionally got bogged down in detailed technical reviews. Recent committee safety reviews appeared to be thorough and conservative.

The quality assurance department was generally effective. The QA operations surveillance program was well structured and effectively implemented and provided relevant performance data to station management. The QA audit group was severely understaffed early in the period, and the training program required improvement. Later in the period, a sample of QA audits appeared to serve effectively as one of the methods to identify problems.

### Summary

The functional areas of Emergency Preparedness and Security continued to maintain the high standards of performance reflective of sound programs, good implementation and aggressive management oversight. The remaining functional areas again demonstrated inconsistency in performance, but an overall improving trend. There was an apparent turning point in Niagara Mohawk's approach to assuring quality, and performance improved in some areas. The improvement appeared to be based on better problem identification, more critical self-assessment, and the institutionalization of processes necessary to sustain good performance.

### III.G.2 Performance Rating

Category 3      Trend: Improving

### III.G.3 Recommendations

None

#### IV. SUPPORTING DATA AND SUMMARIES

##### IV.A Licensee Activities

During the majority of this assessment period Unit 1 remained shutdown and defueled. In January 1990, the core was reloaded following an extensive reverification of systems and procedure readiness by the station staff. Reload activities were conducted competently and professionally with only one minor error. By the end of the assessment period in February 1990, the unit was preparing for restart.

At the beginning of this assessment period, Unit 2 was in a prolonged mid-cycle maintenance and surveillance outage due to the necessity to repair and retest a number of containment isolation valves which failed their local leakage rate tests. Following the completion of this outage the unit was operated for a unit record 135 consecutive days between April and September 1989. Following this record run and planned maintenance outage the unit suffered a number of scrams and forced shutdowns due to personnel errors and equipment problems. These specific events are discussed further in Sections II.C. and III.A. of this report.

##### IV.B Direct Inspection and Review Activities

Three NRC resident inspectors were assigned to the site throughout the assessment period. Region based inspectors performed routine inspections throughout the assessment period. Several NRC team inspections were conducted in the following areas:

##### Unit 1

- Restart Panel review of Restart Action Plan
- Licensed Operator Requalification Program review
- Operator Proficiency with EOPs followup (I)
- Operator Proficiency with EOPs followup (II)
- Annual EP Exercise (full Region I participation)
- Allegation followup
- SSFI followup
- Special team to assess potential harassment and intimidation
- Self-Assessment/Readiness for Restart Report review
- Augmented Inspection Team - Radwaste Building 225 Spill
- Integrated Assessment Team Inspection

##### Unit 2

- Operator Requalification Examination
- Operator Requalification Reexamination



IV.C Enforcement ActivitiesUnit 1Number of Violations by Severity Level

<u>Functional Area</u>	<u>V</u>	<u>IV</u>	<u>III</u>	<u>II</u>	<u>I</u>	<u>Total</u>
Plant Operations		1	1			2
Radiological Controls			1			1
Maintenance/Surveillance		1				1
Emergency Preparedness						0
Security		1*				1
Engineering/Technical Support		2				2
Safety Assessment/Quality Verification		1				1
Totals		6	2			8

\*Also issued to Unit 2 but not included in Unit 2 table

Unit 2Number of Violations by Severity Level

<u>Functional Area</u>	<u>V</u>	<u>IV</u>	<u>III</u>	<u>II</u>	<u>I</u>	<u>Total</u>
Plant Operations		2				2
Radiological Controls						0
Maintenance/Surveillance		1				1
Emergency Preparedness						0
Security						0
Engineering/Technical Support						0
Safety Assessment/Quality Verification		1				1
Totals		4				4

#### IV.D Licensee Event Report Causal Analysis

##### Unit 1

This analysis includes LERs 89-02 through 89-17, 89-19, and 90-01, a total of 18 reports.

<u>Functional Area</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>X</u>	<u>Total</u>
Operations	6	1		2			9
Radiological Controls	1	1					2
Maintenance/Surveillance	1			3			4
Emergency Preparedness							0
Security							0
Engineering/Technical Support	2			1			3
Safety Assessment/Quality Verification							0
Totals	10	2	0	6	0	0	18

##### Cause Codes\*

##### Type of Events

A.	Personnel Error . . . . .	10
B.	Design/Man/Constr./Install . . . . .	2
C.	External Cause . . . . .	0
D.	Defective Procedure . . . . .	6
E.	Component Failure . . . . .	0
	Total	18

\*Root causes assessed by the SALP Board may differ from those listed in the LER

The majority of the LERs were the result of various personnel errors. Attention to detail appeared to be a major contributor.

Unit 2

This analysis includes LER 89-08 through 90-04, a total of 39 reports.

<u>Functional Area</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>X</u>	<u>Total</u>
Operations	9			2	7	1	19
Radiological Controls	2			1	1	1	5
Maintenance/Surveillance	5	2		1			8
Emergency Preparedness							0
Security							0
Engineering/Technical Support		2		4			6
Safety Assessment/Quality Verification	1						1
Totals	17	4	0	8	8	2	39

Cause Codes\*Type of Events

A. Personnel Error . . . . .	17
B. Design/Man/Constr./Install . . . . .	4
C. External Cause . . . . .	0
D. Defective Procedure . . . . .	8
E. Component Failure . . . . .	8
X. Other . . . . .	2
Total	39

\*Root causes assessed by the SALP Board may differ from those listed in the LER

There were 25 fewer LERs issued this period than during the previous assessment period. However, there was still a large number of events caused by personnel error, indicating that the corrective actions taken for similar problems last assessment period were ineffective. The majority of the personnel errors were rooted in inattention to detail.

## ATTACHMENT 1

### SALP Evaluation Criteria

Licensee performance is assessed in selected functional areas, depending on whether the facility is under construction or operational. Functional areas normally represent areas significant to nuclear safety and the environment. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observations.

The following evaluation criteria were used, as applicable, to assess each functional area:

1. Assurance of quality, including management involvement and control;
2. Approach to the resolution of technical issues from a safety standpoint;
3. Responsiveness to NRC initiatives;
4. Enforcement history;
5. Operational and construction events (including response to, analyses of, reporting of, and corrective actions for);
6. Staffing (including management); and
7. Effectiveness of training and qualification programs.

On the basis of the NRC assessment, each functional area evaluated is rated according to three performance categories. The definitions of these performance categories are as follows:

Category 1. Licensee management attention and involvement are readily evident and place emphasis on superior performance of nuclear safety or safeguards activities, with the resulting performance substantially exceeding regulatory requirements. Licensee resources are ample and effectively used so that a high level of plant and personnel performance is being achieved. Reduced NRC attention may be appropriate.

Category 2. Licensee management attention to and involvement in the performance of nuclear safety or safeguards activities are good. The licensee has attained a level of performance above that needed to meet regulatory requirements. Licensee resources are adequate and reasonably allocated so that good plant and personnel performance is being achieved. NRC attention may be maintained at normal levels.

Category 3. Licensee management attention to or involvement in the performance of nuclear safety or safeguards activities are not sufficient. The licensee's performance does not significantly exceed that needed to meet minimum regulatory requirements. Licensee resources appear to be strained or not effectively used. NRC attention should be increased above normal levels.

The SALP Board may assess a functional area to compare the licensee's performance during the last quarter of the assessment period to that during the entire period in order to determine the recent trend. The trend if used, is defined as:

Improving: Licensee performance was determined to be improving near the close of the assessment period.

Declining: Licensee performance was determined to be declining near the close of the assessment period.

A trend is assigned only when, in the opinion of the SALP Board, the trend is significant enough to be considered indicative of a likely change in the performance category in the near future. For example, a classification of "Category 2, Improving" indicates the clear potential for "Category 1" performance in the next SALP period.

It should be noted that Category 3 performance, the lowest category, represents acceptable, although minimally adequate, safety performance. If at any time the NRC concluded that the licensee was not achieving an adequate level of safety performance, it would then be incumbent upon NRC to take prompt appropriate actions in the interest of public health and safety. Such matters would be dealt with independently from, and on a more urgent schedule than, the SALP process.