U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No.	90-15 90-14
Docket No.	50-352 50-353
License No.	NPF-39 NPF-85
Licensee:	Philadelphia Electric Company Correspondence Control Desk P.O. Box 195 Wayne, Pa 19087-0195
Facility Name:	Limerick Generating Station, Units 1 and 2
Inspection Period:	April 10 - May 21, 1990
Inspectors:	T. J. Kenny, Senior Resident Inspector L. L. Scholl, Resident Inspector M. G. Evans, Resident Inspector D. R. Taylor, Reactor Engineer J. A. Nakoski, Reactor Engineer

Approved by: L T Doerflein 7/6/90
L. T. Doerflein, Chief — Date
Reactor Projects Section 2B

Inspection Summary: This inspection report documents routine and reactive inspections during day and backshift hours of station activities including: plant operations; radiological protection; surveillance and maintenance; emergency preparedness; security; engineering and technical support; and safety assessment/quality verification.

Results:

Both units continued operation during the period and Unit 1 attained one year of continuous operation. One violation involving procedure use and compliance was identified (Section 1.3). An allegation involving improper documentation of supervisor qualifications was closed (Section 9.0).

This report also documents PECo-NRC meetings on Emergency Planning and Engineering Support.

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Attachments:
Attachment A, Engineering Management Meeting-List of Attendees
Attachment B, Engineering Management Meeting-Presentation Slides
Attachment C, Emergency Preparedness Meeting-List of Attendees
Attachment D, Emergency Preparedness Meeting - Presentation Slides

Executive Summary

Plant Operations (Modules 71707, 71710, 93702)

Unit 1

On May 22, 1990, the unit attained one year of continuous operation. One violation was issued due to improper utilization of procedures resulting in a spill of radioactive resin. Improper troubleshooting of plant equipment was performed by a reactor operator. Three ENS calls were made involving an isolation of certain valves during inspection of Rosemount transmitters, an Emergency Service Water check valve problem due to incorrect maintenance, and the identification of cable separation inconsistencies in RHR valves.

Unit 2

Two ENS calls were made involving a differential pressure transmitter failure in the HPCI system and instrument gas isolation valve closure due to personnel error.

Operations department management responded to problems promptly and aggressively.

Radiological Protection (Module 71707)

Cleanup of a resin spill in the radwaste building was aggressive and resulted in minimal radiation exposure to the workers.

Surveillance and Maintenance (Modules 61726, 62703)

Review of the surveillance tests on overtime indicate that additional management involvement in the approval of deviations is warranted.

Emergency Preparedness (Module 71707)

Emergency preparedness personnel promptly pursued and corrected a condition which interfered with the proper operation of the emergency sirens.

Security (Module 71707)

The inspectors noted a condition with the emergency diesel generator fuel oil storage tanks which required additional controls.

Engineering and Technical Support (Modules 71707, 90712, 92700)

The engineering disposition of two nonconformance reports (NCRs) was found to lack adequate technical justification and documentation.

Safety Assessment/Quality Verification (Modules 71707, 30703)

Incidents involving the failure to follow procedures and less than adequate quality of NCR dispositions were identified areas of concern. Prompt actions taken by the operations department management were noted when improper troubleshooting was performed by a licensed operator.

DETAILS

1.0 Plant Operations

At the start of this report period both units were operating at 100% power.

On April 24, 1990, Unit 2 power was reduced to 80% because of condenser tube leaks and high copper content in the feedwater system. After the condenser leaks were repaired and copper levels returned to normal, the unit was returned to 100% power on April 30.

On May 6, Unit 1 load was decreased to 50% in order to replace the brushes on the recirculating pump motor generator sets, repair a flange leak in the feedwater system, perform scram time testing and control rod pattern changes. All were performed successfully and the unit was returned to 100% power on the same day.

On May 15, Unit 1 achieved one year of continuous operation with a capacity factor of 93.39%.

At the end of the inspection period both units were again operating at 100% power.

1.1 Reportable Events

Unit 1

On April 15, PECo Instrumentation and Control (I&C) technicians were in the process of evaluating installed Rosemount transmitters as requested by NRC Bulletin 90-01, by taking voltage readings. When the voltmeter was connected to reactor water level instrument (LIS-42-IN681A) a partial group 6C isolation occurred and valves SV-57-133, 183 and 191 closed (drywell and suppression pool inboard containment atmospheric isolation valves for the hydrogen/oxygen analyzers). The technician immediately removed the meter and the isolation signal was reset. There were no adverse actions accompanying this event. The cause of the event was a faulty voltmeter. The Rosemount testing was subsequently performed using a different voltmeter.

On April 20, the 'B' loop of the Emergency Service Water System (ESW) was found to be inoperable due to improper maintenance on the 'B' ESW pump discharge check valve. Refer to Section 3.1.a for additional details.

On April 27, Residual Heat Removal (RHR) heat exchanger bypass valve HV-051-1F048A was tagged out of service to perform an inspection on a suspected cable separation concern. The inspection revealed that two cables did not have the required sleeving per E1412, the electrical installation specification. The two cables (1AB21115A and 1AB21115B) are the feed and control logic supplies respectively for valve HV-051-1F048A. The nonconforming cable sleeving was corrected and the valve was returned to operable status. Steps were then initiated to inspect the HV-051-1F048B valve. The inspection revealed that this valve also violated the separation criteria. Valve HV-051-1F048B was corrected to comply with the separation criteria. The Unit 2 RHR heat exchanger bypass valves were inspected and were found to be in compliance with the cable separation requirements.

Unit 2

On April 18, the High Pressure Coolant Injection (HPCI) system was declared inoperable due to a differential pressure (DP) transmitter failure. Transmitter PDT-55-2N057D (HPCI steam line DP transmitter) failed causing an isolation of the inboard steam valve. HPCI was already isolated by the outboard valve for planned maintenance. The cause of the transmitter failure is not available at this time and is under investigation.

On April 25, at 4:07 p.m., the outboard valve of train 'B' of the instrument gas system isolated during the performance of a surveillance test when a system engineer removed a jumper prior to the isolation signal being sealed in. The system was immediately returned to normal and there was no adverse impact on plant operations.

The above events were reported to the NRC via the Emergency Notification System (ENS) and the root cause analysis and corrective actions will be reviewed further upon issuance of the Licensee Event Reports as part of the routine resident inspection program.

1.2 Improper System Troubleshooting

On April 11 an operator noted that the flow indicator (FI-40-IR653P) for "D" Main Steam Isolation Valve-Leakage Control System (MSIV-LCS) was indicating 9.0 SCFM and notified the shift supervisor (SS). Normally there should be no flow in the system. The SS instructed an I&C technician to begin to troubleshoot the system. The I&C technician thought the problem could be due to a sticking transmitter. Problems with sticking transmitters had been experienced in the past and a plant

modification is planned to install more reliable flow instruments. In this instance, tapping on the detector did not appear to free up the device. The reactor operator became involved and attempted to free the flow device by opening the bypass valve, HV-040-1F003P. This was not successful. The operator then proceeded to close the bypass valve and open the stop valve, HV-040-1F002P. Again no change in flow indication was seen. The operator then closed the stop valve and opened the inboard isolation valve, HV-040-1F001P, and flow indication began to increase. The operator immediately attempted to close the inboard isolation valve but flow remained upscale. The bypass valve was again opened and flow dropped to 10 SCFM and then settled at 30 SCFM. The inboard isolation valve failed to close fully and the stop valve was leaking by its seat.

The operator informed the shift supervisor of the problem and as a result, action was taken by operations management to correct the situation. The inboard isolation valve was manually closed to stop the leakage.

Followup troubleshooting determined that the inboard isolation valve failed to fully close due to the operator suddenly reversing direction of the valve.

The resident inspectors reviewed the event and after discussions with operations department managers were satisfied that plant management recognized the seriousness of performing troubleshooting of systems without the proper procedures. The inspectors noted that individuals were disciplined for their actions and management reaffirmed the seriousness of this type of inappropriate operation through briefings of licensed operators. No further action was taken by the resident inspectors at this time. However, another failure to use proper procedures has resulted in a violation as delineated in Section 1.3 of this report.

1.3 Resin Spill

On May 10, 1990, a quantity of radioactive resin was inadvertently pumped into the centrifuge fill and decontamination station room. Prior to the recirculation of the waste sludge tank the operator failed to close the waste sludge to condensate separator isolation valve, valve no. 66-0009, as required by procedure S.66.8.G, "Transfer of Waste Sludge Tank to Condensate Phase Separator." As a result, the mixture flowed to the drip pots of the centrifuge which overfilled and the mixture overflowed onto the floor. The room is approximately a seven by seven foot square and the floor is sloped to a

floor drain located in the center of the room. The resin was approximately three inches deep at the floor drain and decreased to a depth of approximately one half inch at the edge of the room. Radiation readings were between 60-150 mR/hr at head level and approximately 1000 mRem/hr on contact at foot level. Free standing water was reading between 50-300 mR/hr on contact. A cleanup began immediately by personnel utilizing the proper decontamination clothing and dosimetry. The cleanup continued and by May 11, 1990, the entire area was returned to normal background radiation levels. A total of 0.202 man-rem was expended during the cleanup.

Discussions and investigation on the part of the resident inspector revealed that procedure S66.8.G, "Transfer of Waste Sludge Tank to Condensate Phase Separator," is in place and if properly utilized, valve 66-0009 would have been closed and the recirculation of the waste sludge tank would have been performed correctly. However, the operator apparently failed to adequately consult the procedure and did not close the valve as specified in the procedure. This is a violation of technical specification (TS) 6.8.1 for failure to follow procedures (50-352/90-15-01).

The inspector noted that in response to this incident, PECo is in the process of taking the following corrective actions:

- changing procedure S66.8.G in order to monitor fill station drip pots during sludge transfer.
- designing a modification to install a valve to provide isolation capability to the 'A' centrifuge.
- revising the radwaste operating 'S' procedures to reflect practical radwaste concerns and make it easier for operators to comply.
- counseling the operators on the importance of procedure compliance.

1.4 Engineered Safeguard Feature (ESF) System Walkdown

The inspector conducted a system walkdown of the Unit 2 high pressure coolant injection (HPCI) system. Prior to and during the HPCI system walkdown the inspector utilized the following documents:

FSAR Section 6.3	Emergency Core Cooling Systems
T/S 3/4.3.3	Emergency Core Cooling System Actuation Instrumentation
T/S 3/4.5	Emergency Core Cooling Systems
T/S 3/4.6.3	Primary Containment Isolation Valves

S55.1.A	Normal HPCI Line-up for Automatic Operation
2S55.1.A (COL)	Equipment Alignment for Automatic Operation of HPCI System
2S55.1.D	HPCI System Full Flow Functional Test
ST-1-055-800-2	HPCI System Response Time Testing (completed 11/15/89)
ST-1-055-850-2	HPCI Initiation Response Time Summation (completed 8/21/89)
ST-6-055-200-2	HPCI Valve Test (completed 3/29/90)
ST-6-055-230-2	HPCI Pump, Valve and Flow Test (completed 8/20/89)
DWG M-55	P&ID High Pressure Coolant Injection
DWG M-56	P&ID HPCI Pump/Turbine

During the system walkdown the inspector noted that the HPCI system was properly aligned and in agreement with the system drawings and the system line-up for automatic operation. The inspector's review of procedures confirmed the HPCI system's operability as required by the technical specifications. The HPCI instrumentation was in current calibration.

Overall the inspector noted that the condition of the HPCI system was satisfactory and that the HPCI system would adequately perform its required safety function when required.

2.0 Radiological Protection (71707)

The cleanup of the resin spill (Section 1.3) was performed in an expedient manner. The resin was contained and the area was cleaned in 24 hours. Routine walkdowns of the facility did not note any adverse conditions.

3.0 Surveillance and Maintenance (61726, 62703)

The inspectors observed portions of the surveillance testing and maintenance activities listed below to verify that the test instrumentation was properly calibrated, approved procedures were used, the work was performed by qualified personnel, limiting conditions for operations were met, appropriate system or component isolation was provided and the system was correctly restored following the testing or maintenance activity.

3.1 Maintenance

Maintenance activities observed and/or reviewed included:

MRF 9002717	D13 EDG Speed Switch Replacement
MRF 8981786	'B' ESW Pump Discharge Check Valve Maintenance
MRF 8881862	D14 EDG 18 Month Overhaul
MRF 9002721	D13 EDG Transfer Pump Repair

April 19, the 'B' ESW pump was out of service with maintenance work being performed on the 'B' pump discharge check valve. The maintenance work was completed on April 20, and at 1:20 a.m., operations personnel initiated the post maintenance testing of this check valve utilizing Surveillance Test (ST) ST-6-011-232-0, "B Loop ESW Pump, Valve, and Flow Test." Step 6.5.24 of the procedure requires the operator to check that while the 'D' ESW pump is operating, the 'B' pump is not reverse rotating, verifying that the check valve (11-0001B) is closed properly.

The operator discovered that the check valve was not preventing reverse flow through the 'B' pump. Investigation revealed that the check valve disc actuating arm had been installed backwards such that when the actuating arm was pinned in the neutral position as directed by the maintenance procedure, the check valve disc was held open off its seat approximately ten degrees. The actuating arm is not directly connected to the disc and when correctly installed, does not prevent the disc from operating properly. Pinning of the actuating arm secures the arm in the neutral position and prevents potential personnel injury when the check valve opens but also does not affect the operation of the disc when installed properly. However, in this case because the actuating arm was installed backwards, the pinned actuating arm was restricting the full closure of the valve disc resulting in the 'B' Loop of ESW being inoperable. Upon removal of the pin from the actuating arm the valve fully closed and the system was then considered operable. While the 'B' Loop of ESW was inoperable, adequate flow to the loop cooling loads could not have been guaranteed. There was no demand to the 'B' Loop of ESW while this condition existed and the plant normal service water system was providing adequate cooling water flow to all operating equipment serviced by the 'B' Loop of ESW. The cause of this event was a personnel error in that the actuating arm was not "match marked" prior to its removal resulting in an incorrect reinstallation. The incorrectly assembled actuating arm was repositioned to the correct orientation on April 20.

The technicians involved in this event were counseled regarding the need for attention to detail. A walkdown inspection of all other check valves of this type was conducted by PECo and no other similar problems were found.

Surveillance tests are performed following maintenance of all check valves in safety related systems. This testing verifies proper operation of the valve prior to restoring the system to normal operation. Therefore, there is no generic concern regarding other safety related check valves in the plant being partially open due to maintenance work.

The inspectors noted that, in addition to correcting the problem on the ESW check valve and inspecting other check valves for similar problems, PECo plans to take the following corrective actions:

- Preventive Maintenance Procedure, PMQ-500-073, will be revised to include a procedural step to "match mark" the disc actuating arm prior to its removal. Additionally, procedural notes will be included to assure that no excessive force is required when pinning the disc actuating arm to the arm bracket, and to emphasize the importance of installing the actuating arm correctly.

- PMQ-500-073 is presently undergoing its five year revision. This one procedure encompasses the four types of Anchor Darling check valves and will be superseded by four individual procedures for each check valve type. Each procedure will include the procedural step and notes described above. These procedures will be completed and implemented by August 31, 1990.

- Operations will issue a "Shift Training Bulletin" describing this event and the potential for equipment damage due to delays in detecting problems following maintenance. This bulletin will be issued by May 30, 1990.

- Operations will review and revise as necessary the applicable guidance for post-maintenance testing of the ESW system to ensure that this testing is performed expeditiously and check valve problems are promptly identified. This action will be completed by June 30, 1990.

- Similar systems will be reviewed for generic implications and the applicable guidance will be revised as necessary. This action will be completed by August 15, 1990.

3.2 Surveillance

In addition to the HPCI system tests reviewed and documented in Section 1.4, the inspectors observed and/or reviewed the following surveillance tests:

RT-5-030-578-1	Routine Jet Pump Large Volume Liquid Sample from PASS
ST-0-107-980-0	Monthly Review of Health Physics Personnel Overtime (January 1990)
ST-1-107-980-0	Monthly Review of Performance Personnel Overtime (November 1989)
ST-2-107-980-0	Monthly Review of Nuclear Section Personnel Overtime (January 1990)
ST-3-107-980-0	Monthly Review of Reactor Engineering Personnel Overtime (December 1989)
ST-4-107-980-0	Monthly Review of Key Maintenance Personnel Overtime (December 1989)
ST-5-107-980-0	Monthly Review of Chemistry Support Personnel Overtime (January 1990)
ST-5-107-981-0	Monthly Review of Chemistry Applied Personnel Overtime (January 1990)
ST-6-107-980-0	Monthly Review of Operations Personnel Overtime (January 1990)

The inspector reviewed the above procedures to verify that use of overtime was consistent with the requirements of plant technical specification 6.2.2.f. It was noted that the requirements were being met, however, approval for deviations from the working hour guidelines was generally given by someone below the plant manager or superintendent level manager. Delegating the approval for deviations is permitted by the TS however routine approval given by supervisors below the superintendent level does not appear to meet the intent of administrative procedure A-40, "Working Hour Restrictions." The inspector also noted that the staffing deviation forms did not document a good basis for permitting the work hour deviations. These items were discussed with plant management who acknowledged the inspector's concerns.

4.0 Emergency Preparedness (71707)

On April 27, PECo made a one hour notification, via the ENS, that the offsite siren system may be inoperable. The problem was subsequently identified as a frequency interference caused by the unauthorized use, by persons not connected with the licensee, of a device used to detect stolen cars. These devices, which had been applied to a group of PECo poles, caused an interference with the actuation signal for the siren system. The devices have been removed and the Federal Communication Commission (FCC) has been informed in order to aid in the resolution of the frequency conflict. The system was out of service from 12:15 p.m. until 5:00 p.m. on April 27.

5.0 Security

During a tour of the facility, the inspector noted the access hatches to the diesel generator fuel oil storage tanks and the fill pipe caps did not have adequate provisions to properly secure them. Following discussions with the licensee, appropriate compensatory actions were initiated.

6.0 Engineering and Technical Support

The inspectors reviewed several nonconformance reports(NCRs) and identified concerns with the following two NCRs:

NCR No. L90029

During review of NCR No. L90029, the inspector noted a discrepancy between section 1 of the NCR (problem description and proposed disposition) and the approved disposition and attached 10 CFR 50.59 review for the NCR. Specifically, the problem description stated that certain post accident monitoring instruments required by Regulatory Guide (RG) 1.97 and listed in FSAR table 7.5 have an accuracy requirement per the FSAR Table of ±2%. However the current calibration procedures for the instruments only require accuracy of ±3%. The proposed disposition was to review RG 1.97 and other engineering documentation to determine if the ±3% accuracy is acceptable and will support a "use as is" disposition. However, neither the approved disposition or the attached 10 CFR 50.59 review gave any technical justification for accepting a ±3% accuracy. Instead, the disposition was to process Licensing Document Change Notice (LDCN) 00032, to merge the information in FSAR Tables 7.5.1 and 7.5.3 into one table. The inspector reviewed LDCN-00032 which included a proposed solution but was open pending final resolution and approval. No technical justification for accepting a ±3% accuracy was included in the LDCN. In

fact, the inspector noted that the justification for the proposed solution for the LDCN was "per disposition of NCR No. L90029." As stated above, the approved disposition for the NCR did not include any technical justification, instead it referenced LDCN-00032. The inspector noted that the NCR had been approved and had received Quality Assurance review and approval, even though the approved disposition did not address the problem description and proposed disposition. The inspector questioned several PECo representatives regarding the NCR and LDCN. The representatives stated that a review was done and the ±3% accuracy was determined to be adequate. However, this review was not documented or referenced in the NCR.

NCR No. L90067

During the performance of periodic maintenance on the D-13 Emergency Diesel Generator, the fuel oil transfer pump motor was found to have a low insulation resistance. PMQ-500-003, "Preventative Maintenance Procedure for Megger Testing of Rotating Electrical Equipment," requires that the insulation resistance of 480 volt motors be a minimum of 1.48 million ohms (megohms). This criterion was obtained from IEEE standard 43-1974, "Recommended Practice for Testing Insulation Resistance of Rotating Machinery."

When tested on April 3, the insulation resistance was found to be 0.6 megohms. Due to the fact that the test data failed to meet the acceptance criteria in PMQ-500-003, the maintenance department initiated an NCR to obtain an engineering evaluation of the acceptability of this condition. The engineering disposition stated that the motor was acceptable for use until the motor could be replaced or rewound at the earliest opportunity. The rationale for the disposition was that when the motor is operated the moisture is driven from the insulation with a resultant increase in insulation resistance. The inspectors agreed that this would occur; however, the NCR disposition had no provisions for keeping the motor dried to maintain a satisfactory insulation resistance nor could a minimum acceptable "as-found" insulation resistance value be determined. Also, there was no increased frequency of monitoring of the motor insulation resistance thus additional degradation of the insulation could occur undetected and result in motor failure upon energization.

These concerns were discussed with members of the onsite engineering staff and with plant management. PECo then decided to perform an insulation test of the motor on a monthly basis. On May 11, PMQ-500-003 was performed and the as-found insulation resistance was found to be 0.4 megohms. Based on this result the motor was removed and sent to a motor shop for repairs.

The inspectors concluded that the basis for the "use as is" disposition, for the NCRs discussed above, lacked adequate technical justification. The inspectors discussed this concern with the licensee. Since NCRs are used to alert management about problems within the facility, it appears managagement attention is warranted to ensure they are properly dispositioned. The inspector noted that licensee management briefed engineering department personnel on the importance of ensuring that all dispositions are technically adequate. Also, a task force has been designated to review additional NCRs in order to assess the extent of this problem.

7.0 Safety Assessment/Quality Verification

7.1 Strengths

- The resin spill of May 10, was cleaned up in an expedient manner and, considering the activity of the resin, the cleanup was performed with a minimum of exposure to personnel.

- The immediate action taken by management for the improper system troubleshooting on April 11, was appropriate and timely.

7.2 Weaknesses

- Personnel failure to follow proper procedures during the resin transfer on May 10, resulted in a resin spill.

- The use of NCRs are intended to inform management of potential problems with the plant or equipment. During the review of NCRs conducted by the resident inspector, two NCRs reviewed lacked adequate documentation and technical justification. In the case of the diesel fuel oil transfer pump low megger readings, the condition remained for weeks. Only following several discussions by the resident inspectors with engineering, supervision and plant management was adequate action initiated. The plant manager, in conjunction with the Engineering Department, has issued a directive that strictly

delineates how NCR "Use as Is" dispositions will be concurred in by the plant duty manager ("Staff Duty Stander"). This will elevate potential reportability and equipment operability determinations to the proper management level for appropriate actions to ensure NRC regulations are satisfied .

8. Review of Licensee Event Reports (LERs) and Special Reports

The following LERs or Special Reports were reviewed by the inspector and determined to have accurately described the events and to have been properly addressed for corrective or compensatory action:

8.1 Unit 1

LER 1-90-009, April 5, 1990
Manual control room chlorine isolation of the habitability control room isolation system (an Engineered Safety Feature). The isolation was in response to "High Chemical Concentration."

LER 1-90-010, April 15, 1990
Inadvertent actuation of the primary containment and reactor vessel isolation control system (an Engineered Safety Feature) due to a faulty voltmeter.

LER 1-90-011, April 20, 1990
"B" Loop of Emergency Service Water System (ESW) inoperable because of an improperly installed check valve; discussed in Section 3.1 of this report.

Monthly Operating Report for March 1990, dated April 9, 1990

8.2 Unit 2

LER 2-90-004, March 8, 1990
High Pressure Coolant Injection (HPCI) System declared inoperable because the air line to the HPCI turbine steam supply valve broke at its fitting.

LER 2-90-005, March 9, 1990
Engineered Safety Features Actuation due to loss of power to a Reactor Protection System/Uninterruptible Power Supply distribution panel.

LER 2-90-006, March 12, 1990
Inadvertent actuation of the HPCI System and Primary Containment and Reactor Vessel Isolation Control System during Performance of an Instrumentation and Controls Surveillance Test.

Monthly Operating Report for March 1990, dated April 9, 1990

Startup Report dated April 2, 1990

No additional concerns were identified upon review of the above listed reports.

9.0 Allegation Regarding Incorrect Information in the FSAR

On April 4, the NRC received an allegation that information delineated in the FSAR was not accurate, in that a certain supervisor did not have a masters degree as indicated in the published resume. The NRC Region I Allegation Panel referred the matter to PECo to investigate. The results of that investigation are as follows:

- The resume was published depicting that the individual in question had a masters degree, however, the individual never completed the masters thesis in order to obtain that degree.
- The individual submitted the resume on the premise that the thesis would be completed and then, subsequently did not complete it.
- The individual was not aware that the resume had been published until confronted recently.
- The individual's position does not require a masters degree (ANSI/ANS 3.10 1978 and RG 1.8).

Based on the above, the resident inspector concluded that although an error exists in the resume, the individual was qualified for the position held, and that the publication of the resume was without the knowledge of the individual. Additionally, the licensee has decided to remove the resume section from the FSAR. The FSAR requires the publication of resumes for initial licensing, thereafter, all new job positions are reviewed utilizing the proper ANSI/ANS standards upon announcement of the position change.

Based on the above, the inspector considers the question of the supervisor's qualifications closed.

10.0 Closure of Temporary Instruction 2500/27 Final Inspection of Bulletin 87-02

In 1987, the NRC issued Bulletin 87-02 "Fastener Testing to Determine Conformance with Applicable Material Specification." The bulletin required PECo to review their receipt inspection requirements and internal controls for fasteners (studs, bolts, cap screws and nuts) in stores to ensure that the required mechanical and chemical specification requirements are met.

PECo complied with the bulletin and issued the results of their findings in a letter to the NRC dated February 17, 1988. The results of the testing showed that five sampled fasteners were outside of the mechanical specification requirements. A second round of testing on these five samples resulted in four of the five being classified as unsatisfactory. PECo performed an engineering evaluation and determined that although the fasteners were outside of the required specification and had been used in various applications within the plant they would satisfy the performance requirements of their intended application. The remaining portion of the questioned fasteners were discarded. The inspector reviewed the engineering evaluation and concluded that the engineering evaluation was performed in accordance with sound engineering judgment. PECo issued a second letter to the NRC on July 26, 1988, in response to Bulletin Supplements, confirming the results of the testing and the engineering evaluation for the "use as is" judgment on using some of the fasteners. The second letter also listed PECo's suppliers of fasteners. After further inspection and discussions with PECo management the inspector has determined the following:

- Although not in place when the questionable fasteners were received, PECo now has a sampling and testing program that is applicable to all Grade 5 and above Q and non-Q fasteners.

- When fasteners are found to be out of specification they are returned to the manufacturer for disposition.

- PECo is reducing their suppliers of fasteners to five from the original 35 listed in their second response letter to the NRC.

- There is currently QA auditing of the receipt inspection program covering fasteners.

The inspector has no further questions concerning PECo's actions in response to NRC Bulletin 87-02.

11.0 Meetings at the Regional Office

PECo Engineering

On April 27, PECo management conducted a meeting at the NRC Region I office to present improvements that are pending and that have been made to the engineering department since the last Systematic Assessment of Licensee Performance (SALP). Attachment A is the list of attendees, and Attachment B is the set of slides used during the presentation.

Utilizing a "Root Cause Analysis Task Force," PECo had conducted an internal investigation into engineering practices within the engineering department and its support to the station regarding engineering evaluations and design changes. A presentation of the findings was presented to the NRC Section Chief and resident inspectors on September 27, 1989, and documented in inspection report 50-352/89-19, 50-353/89-28.

PECo stated that these improvements should be implemented by the end of the fourth quarter of 1990. The NRC is continuing to monitor these changes.

Emergency Preparedness

Also on April 27, PECo management conducted a meeting at the NRC Region I office to discuss the status of the Emergency Preparedness Program. Mr. G. Leitch, Vice President, Limerick, discussed management's commitment to, and improvement of, the Emergency Preparedness Program. Mr. P. Duca, Support Manager, discussed on-site emergency preparedness. Major topics included: station organization, both staffing and reportability chain; program enhancements such as accountability, drills, training and the Emergency Response Organization (ERO) on-call roster; and the establishment and continuation of management oversight in the emergency preparedness area. Mr. C. Adams, Director, Emergency Preparedness, discussed corporate support of the Emergency Preparedness Program. Major topics included: definition of the Emergency Preparedness Program requirements; the drill and exercise program; commitment tracking; and the ERO. Meeting attendees are listed in Attachment C and the licensee's presentation material is included in Attachment D.

12.0 Exit Interview (30703)

The NRC resident inspectors discussed the issues in this report with the licensee throughout the inspection period, and summarized the findings at an exit meeting held with the site Vice President, Mr. G. M. Leitch on May 2. No written

inspection material was provided to licensee representatives during the inspection period.

On May 11, an exit was conducted to present the results of the Regulatory Effectiveness Review (RER). The RER is a pre-announced team inspection performed to evaluate the effectiveness of the Security Plan and its implementation at a nuclear facility. The team's findings and inspection report are considered safeguards information.

On May 11, an exit was conducted to present the results of an inspection in the area of liquid and gaseous effluent releases. The results of this inspection are documented in combined inspection report 50-352/90-16 and 50-353/90-15.

ATTACHMENT A
Engineering Meeting
PECo - Limerick
4/27/90, 2:00 p.m.

LIST OF ATTENDEES

NRC	
T. J. Kenny	Senior Resident Inspector
L. T. Doerflein	Chief, Reactor Projects Section 2B
J. Nakoski	Reactor Engineer
R. Blough	Chief, Projects Branch 2, DRP
J. Durr	Chief, Engineering Branch, DRS
J. Wiggins	Deputy Director, DRP
PECo	
M. J. McCormick	Plant Manager, Limerick
G. M. Leitch	Vice President, Limerick
D. R. Helwig	Vice President, NE&SD
L. B. Pyrih	Manager, Nuclear Engineering Division
G. J. Madsen	Regulatory Engineer, Limerick
R. M. Krich	Limerick Licensing Branch Head
J. Thinnes	QD Specialist
Other	
A. K. Bhattacharyya	PA/DER/DRP

Philadelphia Electric Company
PRESENTATION TO NRC REGION I

ENGINEERING SUPPORT OF LIMERICK GENERATING STATION CORRECTIVE ACTION IMPLEMENTATION PLAN

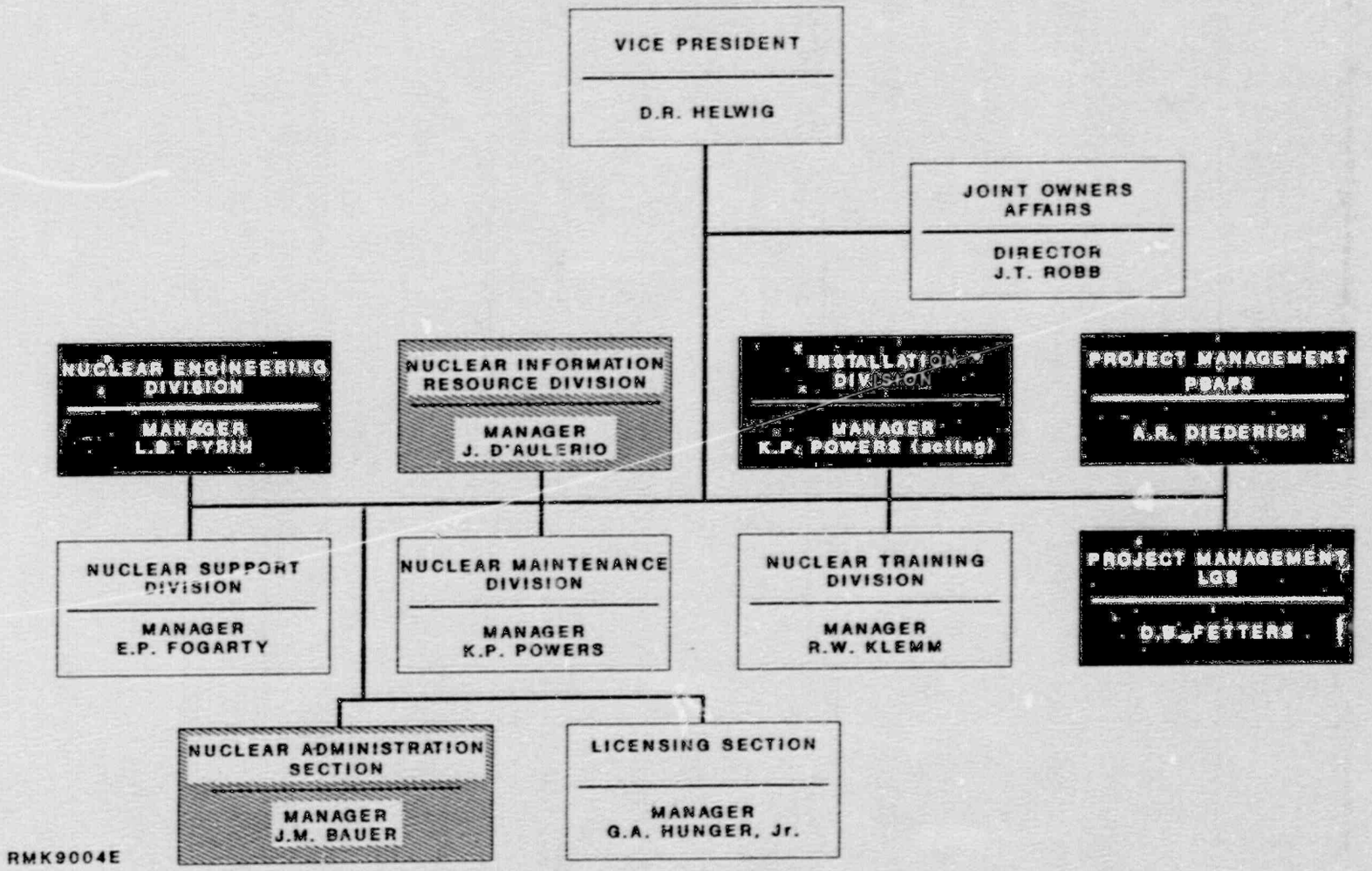
APRIL 27, 1990

AGENDA

- Introduction - D.R. Helwig, V.P. Nuclear Engineering and Services.
- Process - J. Thinnes, Organizational Development Specialist, Limerick Generating Station.
- Corrective Action Implementation Plan Summary - L.B. Pyrih, Manager, Nuclear Engineering Division.
- Conclusions - M.J. McCormick, Plant Manager, Limerick Generating Station.

RMK9004B

Philadelphia Electric Company
Nuclear Engineering and Services Department
Organization effective as of April 23, 1990



RMK9004E

ENGINEERING/LGS INTERFACE

Key Issues from Root Cause Analysis

- Engineering's Lack of Appreciation of Station Needs
- Less than Adequate Team Work Between Engineering and LGS
- Failure of Both Engineering and LGS Managers to Establish Clear, Mutual Expectations.

ENHANCEMENT OF ENGINEERING'S APPRECIATION OF STATION NEEDS

- **Definition of Station Needs and Organizational Roles**

  Define Needs
  Define Roles and Responsibilities
  Develop Interface Agreement

- **Enhanced Communication and Training**

  Communicate Organizational Structure
  Senior Management Meetings
  Team Building
  Workshop on Reportability/Operability

- **Process-Based Analysis and Response to Station Needs**

  Assess On-site Engineering Staffing Levels
  Evaluate Quality of EWR Questions and Answers

INCREASE TEAMWORK BETWEEN ENGINEERING AND LGS

- **Joint Training**

  System Engineer Training
  Conflict Management Training

- **Joint Participation in Development Activities**

  Quality Expectations
  Quality Improvement Strategy
  Common Budget Preparation
  Celebration of Successes

ESTABLISHMENT OF CLEAR AND MUTUAL EXPECTATIONS

- **Mutual Planning Efforts**

  Budget Integration
  Business Plans
  IMP/SMMG

- **Development and Use of Business Planning Tools**

  MOD Process Discipline

- **Feedback to Management**

PROCESS

- SPONSORSHIP FROM TOP MANAGEMENT
- CREATES SYSTEMATIC METHOD TO IDENTIFY/ADDRESS ISSUES
- FOSTERS OPEN AND CANDID DISCUSSIONS OF ISSUES
- ASSIST IN DEVELOPING ACTION PLANS

ATTACHMENT C
Emergency Preparedness
PECo-Limerick
4/27/90, 1:00 p.m.

LIST OF ATTENDEES

NRC	
T. J. Kenny	Senior Resident Inspector
L. T. Doerflein	Chief, Reactor Projects Section 2B
J. Nakoski	Reactor Engineer
R. Blough	Chief, Projects Branch 2, DRP
R. Bellamy	Chief, Facilities Radiological Safety and Safeguards Branch, DRSS
C. Conklin	Emergency Preparedness Specialist
PECo	
M. J. McCormick	Plant Manager, Limerick
G. M. Leitch	Vice President, Limerick
D. R. Helwig	Vice President, NE&SD
P. Duca	Support Manager, Limerick
G. J. Madsen	Regulatory Engineer, Limerick
R. M. Krich	Limerick Licensing Branch Head
J. Thinnes	OD Specialist
R. C. Brown	Site EP Specialist
Other	
A. K. Bhattacharyya	PA/DER/DRP

EMERGENCY

PREPAREDNESS

LGS

AGENDA

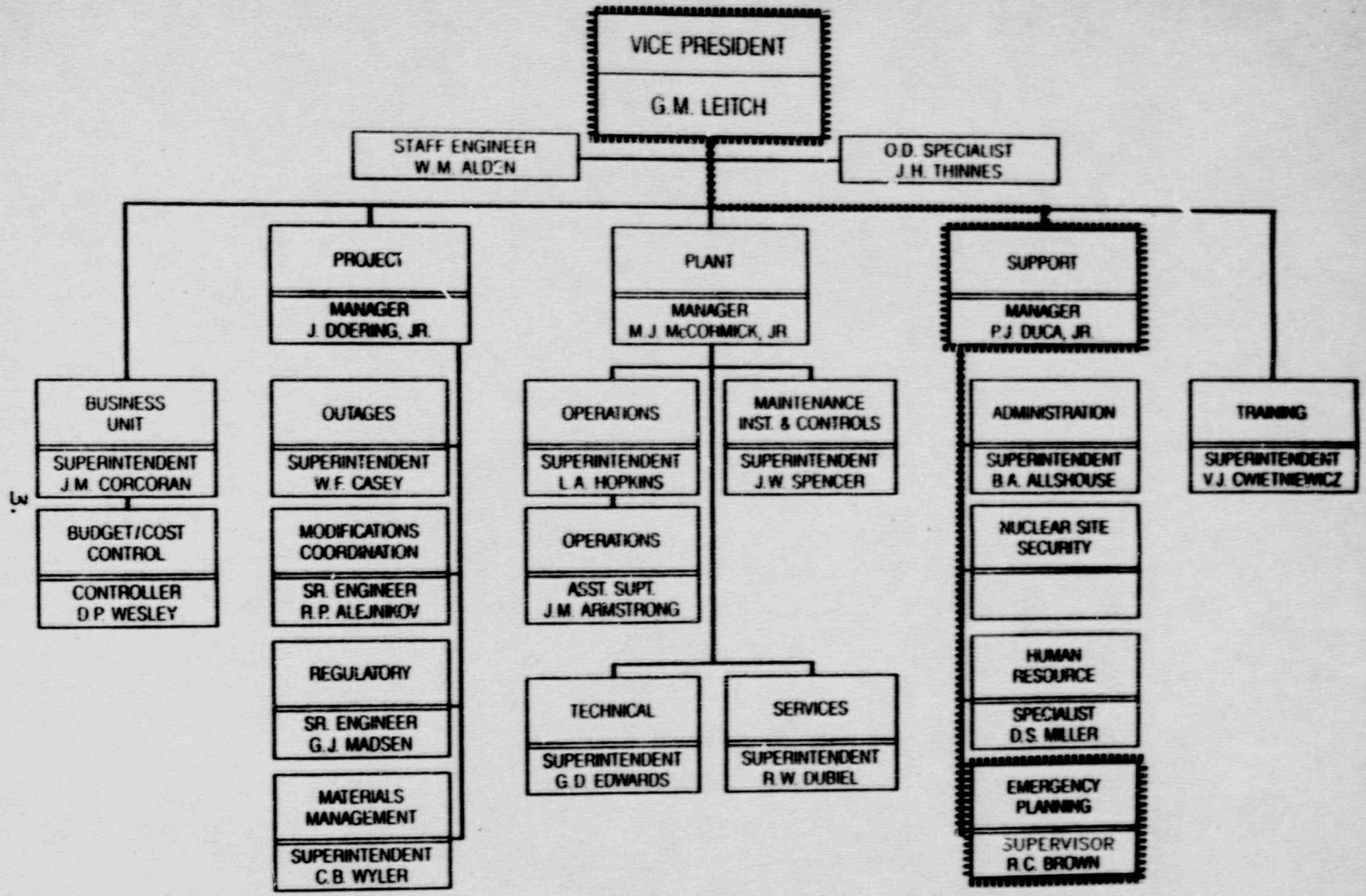
INTRODUCTION	GRAHAM LEITCH
LGS EMERGENCY PREPAREDNESS STATUS	PHIL DUCA

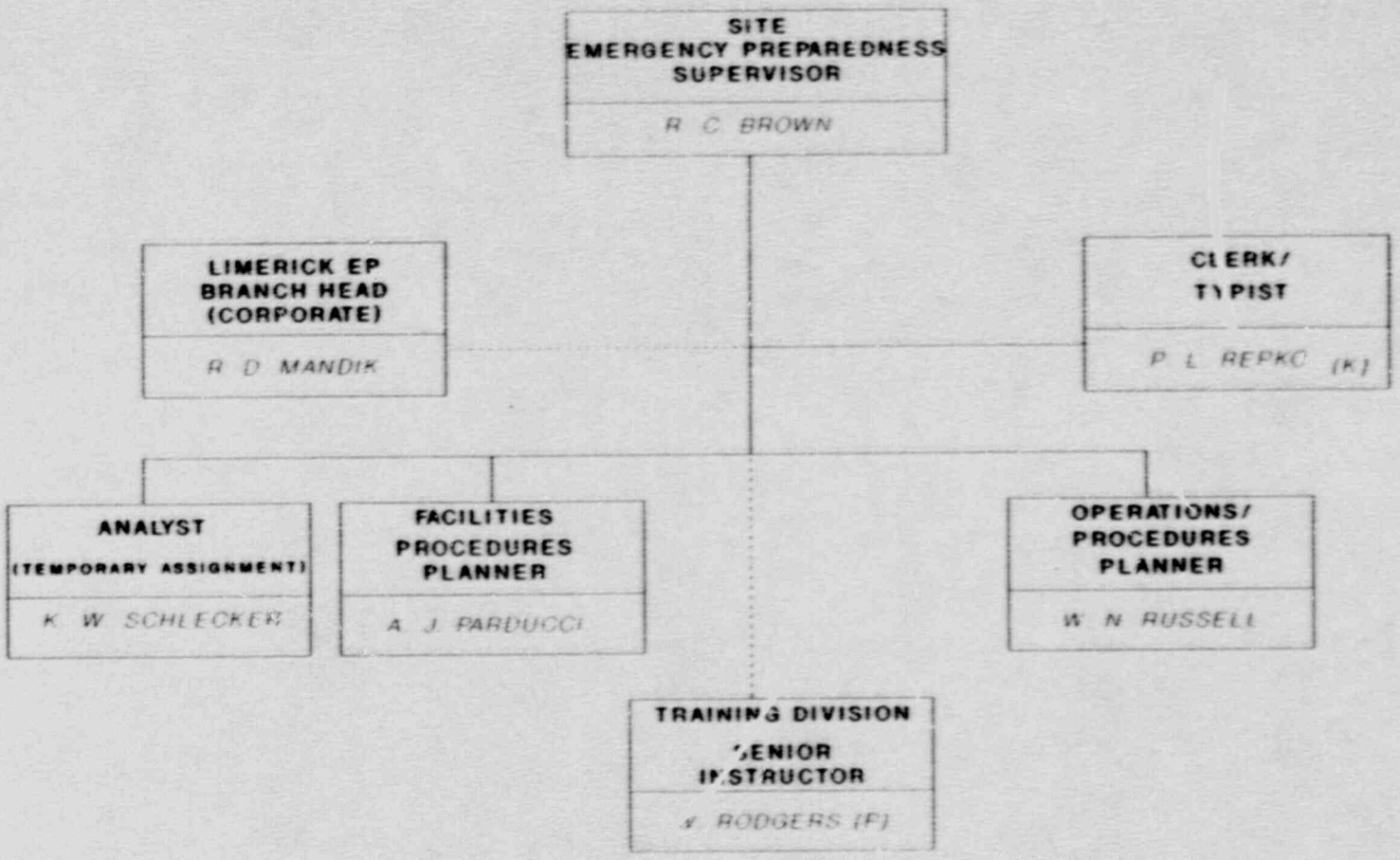
- ORGANIZATION
- ENHANCEMENTS
- MANAGEMENT OVERSIGHT

OVERALL EMERGENCY PREPAREDNESS PROGRAM STATUS	CRAIG ADAMS

- ACTION PLAN PROGRESS
- ONGOING EP ACTIVITIES

CONCLUSIONS	GRAHAM LEITCH


VICE PRESIDENT
G.M. LEITCH
STAFF ENGINEER
W.M. ALDEN
O.D. SPECIALIST
J.H. THINNES
PROJECT
MANAGER
J. DOERING, JR.
PLANT
MANAGER
M.J. McCORMICK, JR.
SUPPORT
MANAGER
P.J. DUCA, JR.
BUSINESS UNIT
SUPERINTENDENT
J.M. CORCORAN
BUDGET/COST CONTROL
CONTROLLER
D.P. WESLEY
OUTAGES
SUPERINTENDENT
W.F. CASEY
MODIFICATIONS COORDINATION
SR. ENGINEER
R.P. ALEJNIKOV
REGULATORY
SR. ENGINEER
G.J. MADSEN
MATERIALS MANAGEMENT
SUPERINTENDENT
C.B. WYLER
OPERATIONS
SUPERINTENDENT
L.A. HOPKINS
OPERATIONS
ASST. SUPT.
J.M. ARMSTRONG
MAINTENANCE INST. & CONTROLS
SUPERINTENDENT
J.W. SPENCER
TECHNICAL
SUPERINTENDENT
G.D. EDWARDS
SERVICES
SUPERINTENDENT
R.W. DUBIEL
ADMINISTRATION
SUPERINTENDENT
B.A. ALLSHOUSE
NUCLEAR SITE SECURITY
HUMAN RESOURCE
SPECIALIST
D.S. MILLER
EMERGENCY PLANNING
SUPERVISOR
R.C. BROWN
TRAINING
SUPERINTENDENT
V.J. OWIETNIEWICZ


SITE
EMERGENCY PREPAREDNESS
SUPERVISOR
R C BROWN
LIMERICK EP
BRANCH HEAD
(CORPORATE)
R D MANDIK
CLERK/
TYPIST
P L REPKO (K)
ANALYST
(TEMPORARY ASSIGNMENT)
K W SCHLECKER
FACILITIES
PROCEDURES
PLANNER
A J PARDUCCI
OPERATIONS/
PROCEDURES
PLANNER
W N RUSSELL
TRAINING DIVISION
SENIOR
INSTRUCTOR
J RODGERS (F)

ENHANCEMENTS

ACCOUNTABILITY

FIRST AID DRILLS

ERO TRAINING

MINI DRILLS

USE OF SIMULATOR

SELECTION MANAGERS

ERO ON CALL ROSTER

LIMERICK GENERATING STATION
EMERGENCY RESPONSE ORGANIZATION
ON- CALL NOTIFICATION

TO: PHIL DUCA

SUBJECT: ON-CALL SCHEDULE
ERO POSITION: EMERGENCY DIRECTOR
EFFECTIVE DATES: FROM: 4/19/90
TO: 4/26/90
1700 Hours

REQUIREMENTS
as an on-call ERO member
you have the following responsibilities:

Be Fit for Duty

Able to respond within one hour

Be within Beeper Range (or make special provisions)

Maintain Beeper Operable

Provide for coverage in the event of your unavailability

Problems or Questions, contact:
Schedule: John Gast x.3335
Other: Bob Brown x2027

26-Mar-90

LGS EMERGENCY RESPONSE PERSONNEL DUTY ROSTER (See DISTRIBUTION for Initials/Name cross-reference)

NOTE: All changes should be directed to both the Shift Clerk at x2126 and J. Gest at x3335.

EP DUTY WEEK START (SAME AS STAFF DUTY STANDER DUTY WEEK)		04/12/90 1700 HRS	04/19/90 1700 HRS	04/26/90 1700 HRS	05/03/90 1700 HRS	05/10/90 1700 HRS	05/17/90 1700 HRS	05/24/90 1700 HRS	05/31/90 1700 HRS	06/07/90 1700 HRS	06/14/90 1700 HRS	06/21/90 1700 HRS	06/28/90 1700 HRS	07/05/90 1700 HRS	07/12/90 1700 HRS
EP-291, Appendix 1 "PERSONNEL TO BE CONTACTED BY ALL CALL"															
Item 1	Emergency Director (ED)	JMS	PJD	MJM	JD	JMS*	PJD	MJM	JD	JMS	JDP*	MJM	JD	JMS	PJD
Item 2	Emergency Response Managers (ERM)	EFS	WTU	RWD	EFS	WAU	RWD	EFS	WTU	RWD	EFS	WTU	RWD	EFS	WTU
Item 3	Personnel Safety Team Leader	04/10** TJM	04/17** GWM	04/24** GWM	05/01** REL	05/08** REL	05/15** TJM	05/22** TJM	05/29** GWM	06/05** GWM	06/12** REL	06/19** REL	06/26** TJM	07/03** TJM	07/10** GWM
Item 4 (TSC)	TSC Dose Assessment Team Leader	04/10** MAC	04/17** MAC	04/24** MAC	05/01** LAW	05/08** LAW	05/15** LAW	05/22** LAW	05/29** JGF	06/05** JGF	06/12** JGF	06/19** JGF	06/26** MAC	07/03** MAC	07/10** MAC
Item 4 (EOF)	EOF Dose Assessment Team Leader	04/13** DMR	04/20** TBD	04/27** TBD	05/04** TBD	05/11** TBD	05/18** TBD	05/25** TBD	06/01** TBD	06/08** TBD	06/15** TBD	06/22** TBD	06/29** TBD	07/06** TBD	07/13** TBD
Item 5	Technical Support Team Leader	KJW	EWC	KWH*	KJW	EWC	KWH	KJW	EWC	KWH	KJW	EWC	KWH	KJW	EWC
Item 6	Chemistry Sampling & Anal. Team Leader	04/13** CLH	04/20** TJY	04/27** GKB	05/04** TJJ	05/11** CLH	05/18** TJY	05/25** GKB	06/01** TJJ	06/08** CLH	06/15** TJY	06/22** GKB	06/29** TJJ	07/06** CLH	07/13** TSY
Item 7	Damage Repair Team Leader	AJC	LMY	KSK	AJC	LMY	KSK	AJC	LMY	KSK	AJC	LMY	KSK	AJC	LMY
Item 8	Operations Engineer	JMA	LAH*	JAH	JMA	LAH	JAH	JMA	LAH	JAH	JMA*	LAH	JAH	JMA	LAH
Item 9	Security Team Leader (Call x2048 1st)	WHS	WDS	DPM	WHS	WDS	DPM	WHS	WDS	DPM	WHS	WDS	DPM	WHS	WDS
Item 10	I&C Supv for Field Survey Drivers														

* STAFF

** DUTY WEEK VARIES FROM EP DUTY WEEK AND BEGINS ON DATE SHOWN

TRIPOD

RIVER FLOWS/TEMPERATURE/WATER RESTRICTIONS/ALLOTMENT

DATE (LIMITS)	SCHUYLK RIVER FLOW 24HR AVG (560 CFS)	SCHUYLK RIVER TEMP 24HR (NA)	PERKIOMEN FLOW 24HR AVG (210 CFS)	ALLOT MGD TITUS, CROMBY	RELEASE TAMAQUA MGD	BRADSHAW FLOW GPM	DO INSTANT (4.2)	DO 24HR AVG (5.1)
04/25	1593	62	217	0 *	0 *	7000	7.7 (PLY)	8.8 (NOR)

M/U PERMITTED [ ] / RESTRICTIONS APPLY [ ]

* PREVIOUS DAY'S QTY

SHIFT MANAGER ON DUTY (X2125)

	04/26			04/27			04/28			
	A	N	D	A	N	D	A	N	D	A
J. MONAGHAN									****	
C. GILLESPIE	****			****			****			****
G. PATON			****			****				
W. STANLEY										
R. DELANEY		****			****			****		
A. ROMANO										

STAFF DUTY STAN

PRIMARY - T. SHEA (HOME 458-0542)
BACKUP - K. CENCI (935-7532)

PORC REQUESTS/SCHED (X2006)	TIME	AGENDA (NORMALLY ON 5TH FLOOR)
04/26	1330 HRS.	STANDARD
05/03	1330 HRS.	ROUTINE PORC

SPECIAL VISITS/ITEMS

MISCELLANEOUS MEETING SCHEDULE

04/90	1315 HRS	HOUSEKEEKPING
04/18	1330 HRS	GML MONTHLY
04/24	1400 HRS	CAM MONTHLY

EP DUTY ROSTER (04/19, 1700 HRS - 04/26, 1700 HRS, EXCEPT AS NOTED)

ED -	PJD	TSTL -	EWC
ERM -	WTU	CSATL -	TJY
PSTL -	GWM	DRTL -	LMY
		OPS -	LAH
TSCDATL -	MAC	STL -	WDS
EOFDATL -	TBD		

QUALITY CONTROL (ONCALL) - ON WEEKENDS SEE ON CALL SHEETS AT END OF TRIPOD

AFTERNOON SHIFT BEEPER - 578-0636
PRIMARY - RC LESNEFSKY (BEEPER 577-1572 OR HOME 215-997-9134)
BACKUP - E TROY (BEEPER 577-1481 OR HOME 565-3317)

MATERIAL MANAGEMENT (ON CALL)

PRIMARY - A. SKAPIK (BEEPER 578-0160, HOME 489-2573)
BACKUP - C. WYLER (BEEPER 578-0108, HOME 469-0103)

MANAGEMENT OVERSIGHT

1. CONTINUED ROUTINE MEETINGS BETWEEN LIMERICK, PEACH BOTTOM, AND NUCLEAR ENGINEERING AND SERVICES VICE PRESIDENTS AND EP STAFFS

2. ACTION PLAN REVIEW MEETING/ MANPOWER REQUIREMENT EVALUATIONS

3. SUPPORT OF ENHANCEMENTS

4. PROMPT MOBILIZATION DRILLS

5. SIREN LER

LIMERICK GENERATING STATION

Office of the Vice President

September 5, 1989

FROM: G. M. Leitch

TO: Emergency Response Organization Members

SUBJECT: Responsibility for Emergency Preparedness Readiness

Emergency Preparedness is a daily requirement for the safe operation of any nuclear facility and it is an important part of your jobs. You are responsible and will be held accountable for your own readiness and that of those whom you supervise. No one is exempt from emergency preparedness requirements.

Individual members of the Emergency Response Organization (ERO) are chosen to serve by one of the Selection Managers. The Selection Managers are designated by myself to represent all of the important site areas of Emergency Preparedness. A copy of the selection matrix is attached for your information. This matrix defines each ERO position, the qualifications for each position, and who is the responsible selection manager for each position.

All ERO members are responsible for:

1. Maintaining their training current.

2. Providing up-to-date information to the Selection Manager (or designee) for the maintenance of call-in lists.

3. Responding to a call-in if notified by their respective team leaders/group leaders.

4. Providing feedback regarding the technical adequacy of the procedures they use in their ERO roles.

Certain ERO members are required to be on-call so that they can respond promptly in the case of an emergency. In order to assure adequate coverage for this prompt response capability, an EP call-in list has been established. Investigation continues into the best method to fulfill this requirement. However, for the present, this schedule will be published in Thursday TRIPOD minutes. Those individuals designated as on-call are required to respond in accordance with existing procedures when notified of an activation of the ERO. Certain additional responsibilities are associated with being a prompt response person. If you are unable to be available as originally scheduled, you must arrange for one of the other designated alternate members to provide coverage. In addition, you must notify the scheduler or shift clerk of the change so that the correct person can be notified.

On-Call ERO members are expected to be:

1. fit for duty

2. able to be notified

3. able to respond in the required time frame

To re-emphasize, Emergency Preparedness is everyone's business, it is a daily requirement of the job and each individual will be held accountable for acceptable performance of their EP related function.

ORIGINAL SIGNED
J. M. LEITCH

Vice President

JCN/sm

Attachment

EMERGENCY RESPONSE ORGANIZATION POSITIONS

LOCATION	POSITION	SELECTION MANAGER	SELECTION CRITERIA
TSC	Emergency Director Alternates	VP-LGS	Plant Manager Senior designated licensee official, SRO License or certified Shift Superintendent, Shift Supervisor (on shift)
TSC	Technical Support Team Leader Alternates	Plant Manager Superintendent - Technical	Technical Engineer (Previous) experience as Tech Support T.L. or Tech Support Group Leader or Technical Eng. w/SRO license or certified.
	• Technical Support Group Leader	Superintendent - Technical	Results Level Engineer Technical Group
	• Engineering Support (5)	Superintendent - Technical	Test Engineers, Reactor Engineers, I&C Engineers, Engineers - any site group
	• TSC/EOF Communicator	Superintendent - Technical	Engineers or Technical Assistants - any site group
	• TSC/EOF Status Boards (3)	Superintendent - Technical	Engineers or Technical Assistants - any site group
	• TSC/EOF Services Support (6)*	Superintendent - Admin	Typist, Clerks, Stenos
TSC	Chemistry Team Leader Alternates	Plant Manager Plant Services-Superintendent	Sr. Chemist Results Level Chemists Shift Chemist - on shift
	• Chemistry Group Leader	Senior Chemist	Chemistry Technical Assistants
	• Chemistry Sampling Staff	Senior Chemist	Chemistry Technicians, pass qualified
TSC	Damage Repair Team Leader Alternates	Plant Manager Superintendent - Maint, I&C	Engineer-Maintenance Engineer
	• Damage Repair Group Leader	Senior Engineer-Maintenance	Supervisory Engineer or Supervisor Maintenance Division
	• Damage Repair Group		Maintenance Division
TSC	Personnel Safety Team Leader Alternates	Plant Manager Plant Services-Superintendent	Sr. Health Physicist Applied or ALARA Health Physicist HP Sr. Tech. (on-shift)
Note:	( ) positions could be filled from PST members and not designated as Group Leaders		
	• Plant Survey Group Leader	Senior Health Physicist	Health Physicist
	• Plant Survey Group	Senior Health Physicist	Health Physics Technician
	• Dosimetry, Bioassay (Group Leader)	Senior Health Physicist	Health Physics Tech. or Dosimetry Physicist, previous Dosimetry Physicist, or Technical Assistant
	• Respiratory Protection (Group Leader)	Senior Health Physicist	Health Physics Tech. or Respiratory Physicist, previous Respiratory Physicist, Support Health Physicist
	• First Aid/Search & Rescue (Group Leader)	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician

12.

EMERGENCY RESPONSE ORGANIZATION POSITIONS

LOCATION	POSITION	SELECTION MANAGER	SELECTION CRITERIA
	• Vehicle & Evacuee (Group Leader)	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician
	• Personnel Safety Team Staff	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician
TSC	Security Team Leader Alternates	Plant Manager Nuclear Security Specialist	Nuclear Security Specialist Chief Security Coordinator, Security Coordinator, Shift Security Assistant
	• Access Control Group Leader	Nuclear Security Specialist	Security Force Shift Supervision
	• Accountability Group Leader	Nuclear Security Specialist	Security Force Shift Supervision, CAS/SAS trained
	• Security Team Staff	Nuclear Security Specialist	Security Personnel
OSC	OSC Coordinator	Operations - Superintendent	Plant Operator or Shift Supervisor
MCR	Initial Dose Assessment Team Leader	Operations - Superintendent	STA
	Initial Dose Assessment Team	Operations - Superintendent	TAOS
EOF	Emergency Response Manager Alternates	LGS VP LGS VP	LGS Vice President Senior licensee designated official, Site Management experience
TSC	Dose Assessment Team Leader Alternates	Plant Manager Superintendent-Plant Services	Support Health Physicist Physicist
	• Dose Assessment (2)	Senior Health Physicist	Physicist
	• Field Survey Group Leader	Senior Health Physicist	Health Physics Technical Assistant
	• Staff (4 teams)		Health Physics Technician
EOF	Dose Assessment Team Leader	Manager Nuclear Support	Results Level Health Physicist
	Dose Assessment Group	Director Rad Protection	Health Physicist or Technical Assistant
EOF	Training Coordinator	Training - Superintendent	Training Superintendent
		Training - Superintendent	Training Supervisor
TSC	Emergency Preparedness Coordinators	Plant Manager	SEPC, Sr. Engineer EP, Physicist, Technical Assistant
EOF	Planning & Scheduling Coordinator	Project Manager	Sr. Eng-Outage Planning, Eng. Supv. - Outage Planning, Scheduling supervisor

• Includes: TSO Operator, Fax Operator, TSC/EOF Runner, Records Management Clerk, Switch Board Operators (2)

LIMERICK GENERATING STATION

Office of the Vice President

September 5, 1989

FROM: G. M. Leitch

TO: Emergency Response Organization Selection Managers

SUBJECT: Responsibility for Emergency Preparedness Readiness

Attached is the selection matrix which delineates each of the Emergency Response Organization (ERO) positions, the qualifications for each position, and who is the Selection Manager for each of the positions. As Selection Managers, you have the following responsibilities:

1. The selection of individuals having the proper qualifications to serve on the ERO.

2. Assuring designated members are trained prior to assignment to the ERO.

3. Providing adequate depth of coverage (nominally 3 per position) for each ERO position.

4. Maintaining up-to-date call-in lists for the non-on-call ERO positions.

5. Establishing open feedback channels so that program effectiveness can be continually evaluated.

6. Assuring that ERO members maintain their training and qualifications and that they do not serve if the qualification has lapsed.

7. Assuring that each ERO member for whom you are responsible participates in periodic drills and exercises as appropriate to their ERO position.

8. Maintaining your own training current including participation in assigned drills and exercises.

9. Promptly notifying EP organization of any changes in personnel assignments which affect EP.

10. Providing feedback to EP organization regarding procedures which are utilized in your ERO roles.

Emergency Preparedness is a daily requirement for the safe operation of any nuclear facility and it is an important part of our jobs. You are responsible and will be held accountable for your own readiness and that of those whom you supervise. No one can be exempt from Emergency Preparedness requirements.

RIGINAL SIGNED
G. M. LEITCH

Vice President

JCN/sm

Attachment

EMERGENCY RESPONSE ORGANIZATION POSITIONS

LOCATION	POSITION	SELECTION MANAGER	SELECTION CRITERIA
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	• Technical Support Group Leader	Superintendent - Technical	Results Level Engineer Technical Group
	• Engineering Support (5)	Superintendent - Technical	Test Engineers, Reactor Engineers, I&C Engineers, Engineers - any site group
	• TSC/EOF Communicator	Superintendent - Technical	Engineers or Technical Assistants - any site group
	• TSC/EOF Status Boards (3)	Superintendent - Technical	Engineers or Technical Assistants - any site group
	• TSC/EOF Services Support (6)*	Superintendent - Admin	Typist, Clerks, Stenos
TSC	Chemistry Team Leader Alternates	Plant Manager Plant Services-Superintendent	Sr. Chemist Results Level Chemists Shift Chemist - on shift Chemistry Technical Assistants
	• Chemistry Group Leader	Senior Chemist	Chemistry Technicians, pass qualified
	• Chemistry Sampling Staff	Senior Chemist	
TSC	Damage Repair Team Leader Alternates	Plant Manager Superintendent - Maint, I&C Senior Engineer-Maintenance	Engineer-Maintenance Engineer Supervisory Engineer or Supervisor Maintenance Division Maintenance Division
	• Damage Repair Group Leader		
	• Damage Repair Group		
TSC	Personnel Safety Team Leader Alternates	Plant Manager Plant Services-Superintendent	Sr. Health Physicist Applied or ALARA Health Physicist HP Sr. Tech. (on-shift)
Note:	( ) positions could be filled from PST members and not designated as Group Leaders		
	• Plant Survey Group Leader	Senior Health Physicist	Health Physicist Health Physics Technician Health Physics Tech. or Dosimetry Physicist, previous Dosimetry Physicist, or Technical Assistant
	• Plant Survey Group	Senior Health Physicist	
	• Dosimetry, Bioassay (Group Leader)	Senior Health Physicist	
	• Respirator Protection (Group Leader)	Senior Health Physicist	Health Physics Tech. or Respiratory Physicist, previous Respiratory Physicist, Support Health Physicist
	• First aid/Search & Rescue (Group Leader)	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician

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EMERGENCY RESPONSE ORGANIZATION POSITIONS

LOCATION	POSITION	SELECTION MANAGER	SELECTION CRITERIA
	• Vehicle & Evacuee (Group Leader)	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician
	• Personnel Safety Team Staff	Senior Health Physicist	Health Physics Technical Assistant, Health Physics Technician
TSC	Security Team Leader	Plant Manager	Nuclear Security Specialist
	Alternates	Nuclear Security Specialist	Chief Security Coordinator, Security Coordinator, Shift Security Assistant
	• Access Control Group Leader	Nuclear Security Specialist	Security Force Shift Supervision
	• Accountability Group Leader	Nuclear Security Specialist	Security Force Shift Supervision, CAS/SAS trained
	• Security Team Staff	Nuclear Security Specialist	Security Personnel
OSC	OSC Coordinator	Operations - Superintendent	Plant Operator or Shift Supervisor
MCR	Initial Dose Assessment Team Leader	Operations - Superintendent	STA
	Initial Dose Assessment Team	Operations - Superintendent	TADS
EOF	Emergency Response Manager	LGS VP	LGS Vice President
	Alternates	LGS VP	Senior licensee designated official, Site Management experience
TSC	Dose Assessment Team Leader	Plant Manager	Support Health Physicist
	Alternates	Superintendent-Plant Services	Physicist
	• Dose Assessment (2)	Senior Health Physicist	Physicist
	• Field Survey Group Leader	Senior Health Physicist	Health Physics Technical Assistant
	• Staff (4 teams)		Health Physics Technician
EOF	Dose Assessment Team Leader	Manager Nuclear Support	Results Level Health Physicist
	Dose Assessment Group	Director Rad Protection	Health Physicist or Technical Assistant
EOF	Training Coordinator	Training - Superintendent	Training Superintendent
		Training - Superintendent	Training Supervisor
TSC	Emergency Preparedness Coordinators	Plant Manager	SEPC, Sr. Engineer EP, Physicist, Technical Assistant
EOF	Planning & Scheduling Coordinator	Project Manager	Sr. Eng-Outage Planning, Eng. Supv. - Outage Planning, Scheduling Supervisor

• Includes: TSO Operator, Fax Operator, TSC/EOF Runner, Records Management Clerk, Switch Board Operators (2)

Final

EMERGENCY PREPAREDNESS IMPROVEMENT PROGRAM

ACTION PLANS

PROGRAM DEFINITION

DRILLS AND EXERCISES

COMMITMENT TRACKING

MEDICAL/ACCOUNTABILITY/EVACUATION

ERO TRAINING/QUALIFICATION

ERO DESIGNATED/TRAINED/READY

PROGRAM DEFINITION

REVIEW OF ALL EMERGENCY PREPAREDNESS REQUIREMENTS

DEVELOPMENT OF WORK MANAGEMENT /DOCUMENTATION PROCESS FOR ALL EP COMMITMENTS

DEVELOPMENT OF NUCLEAR GROUP ADMINISTRATIVE PROCEDURES PROVIDING DETAILED GUIDANCE FOR EP FUNCTIONAL AREAS

EMERGENCY PREPAREDNESS PERFORMANCE INDICATORS

- ACTION ITEM RESPONSE
- ERO TRAINING
- ACTION PLAN STATUS

DRILLS AND EXERCISES

DEVELOPMENT OF CONTROLLER/EVALUATOR TRAINING

ASSIGNMENT OF SELECTION MANAGERS FOR CONTROLLER/EVALUATOR ASSIGNMENTS

DEVELOPMENT OF IMPROVED CRITIQUES

DEVELOPMENT OF SCENARIOS BY COMPANY PERSONNEL

USE OF SIMULATOR FOR DRILLS

COMMITMENT TRACKING

REVIEW OF ACTION ITEMS FOR LIMERICK. VALIDATION OF ANY QUESTIONABLE ACTION ITEMS

DEVELOPMENT OF PROCEDURE FOR ACTION ITEM TRACKING, REPORTING, AND MANAGEMENT ESCALATION

INITIATION OF PLANNING TO MOVE ACTION ITEM TRACKING TO PIMS

MEDICAL/ACCOUNTABILITY/EVACUATION

DEMONSTRATION OF REVISED ACCOUNTABILITY/EVACUATION PROCESS DURING 11/89 ANNUAL EXERCISE

IMPROVED MEDICAL/FIRST AID DRILL PROGRAM SUPPORTED BY SITE PHYSICIAN ASSISTANT

DEVELOPMENT OF PERFORMANCE STANDARDS BY MEDICAL DIRECTOR AND EMERGENCY MEDICAL PHYSICIAN CONSULTANT FOR MEDICAL RESPONSE. CONTINUED MONITORING OF RESPONSE

ERO TRAINING/QUALIFICATION

DEVELOPMENT OF TRAINING PROGRAM PLAN FOR CORPORATE, LIMERICK, AND PEACH BOTTOM

REVISED LESSON PLANS WHICH INCLUDE PERFORMANCE REQUIREMENTS

DEVELOPMENT OF COMMON APPROACH FOR TRAINING RECORD MANAGEMENT FOR NUCLEAR GROUP EP TRAINING

IMPROVED RO/SRO TRAINING WHICH INCLUDES TABLE TOP AND STATIC SIMULATOR SCENARIOS FOR EVENT CLASSIFICATIONS AND PROTECTIVE ACTION RECOMMENDATIONS TRAINING

ERO DESIGNATED/TRAINED/READY

ASSIGNMENT OF SELECTION MANAGERS FOR ERO ASSIGNMENTS AT LIMERICK AND CORPORATE

IMPROVED TESTING OF ERO CALL OUT PROCESS

SENIOR MANAGEMENT EMPHASIS ON ERO RESPONSE RESPONSIBILITIES

NUCLEAR SERVICES DEPARTMENT
EMERGENCY PREPAREDNESS - IMPROVEMENT PLAN PROGRESS

THE FOLLOWING CHARTS INDICATES ORIGINAL AND CURRENT SCHEDULE FOR SEVEN EMERGENCY PREPAREDNESS IMPROVEMENT PLANS.

NOTE: Original Schedule: Scheduled as originally planned
Current Schedule: Actual progress to date

OBJECTIVE 1.0 : Emergency Preparedness Program Definition

Original:	23Oct89		05Dec90	39% Complete
Current:	23Oct89		13Sep90	46% Complete

OBJECTIVE 2.0 : ERO Training/Qualification

Original:	13Nov89		01Aug90	53% Complete
Current:	13Nov89		17Aug90	50% Complete

OBJECTIVE 3.0 : Drills/Exercises

Original:	01Dec89		29May90	67% Complete
Current:	11Dec89		20Jul90	54% Complete

OBJECTIVE 4.0 : Commitment Tracking/AITS

Original:	13Nov89		28Jun90	59% Complete
Current:	01Dec89		08May90	85% Complete

OBJECTIVE 5.0 : Commitment Tracking/AITS - immediate

Original:	13Nov89		22Jan90	100% Complete
Current:	20Nov89		20Feb90	100% Complete

OBJECTIVE 6.0 : Medical Emergencies

Original:	01Dec89		25Jul90	49% Complete
Current:	08Dec89		14Sep90	20% Complete

OBJECTIVE 7.0 : ERO Designated/Trained/Ready

Original:	13Nov89		24Aug90	47% Complete
Current:	22Jan90		26Dec90	18% Complete

ANALYSIS:

THE CURRENT SCHEDULES INDICATE THAT PROGRESS IS BEING MADE TOWARDS COMPLETION OF THE ACTION PLAN IN 1990. PERCENT COMPLETE VALUES INDICATE ACTUAL COMPLETION OF PLANNED ACTIVITIES TO DATE. ORIGINAL SCHEDULES WERE DEVELOPED BASED ON OPTIMAL RESOURCE AVAILABILITY. RESOURCES HAVE RECENTLY BEEN DISCUSSED WITH MANGEMENT AND ARE BEING ADJUSTED TO MEET THE DEMAND OF THESE IMPROVEMENT PLANS. DATA USED IS CURRENT TO MARCH 27, 1990.

OTHER ONGOING EP ACTIVITIES

COMMON DOSE MODEL DEVELOPMENT

- ACCEPTANCE TESTING
- RESULT VALIDATION
- USER FRIENDLY/PROTECTIVE ACTION RECOMMENDATION

SCENARIO GENERATION MODEL DEVELOPMENT

- ACCEPTANCE TESTS FOR LIMERICK AND PEACH BOTTOM
- VENDOR MODEL CORRECTIONS

COMMON EOF CONSTRUCTION PLANNING

- ERO REVIEW
- IMPROVED DATA PROCESS (TO INCLUDE PROVISIONS FOR SIMULATORS AND ERDS)
- IMPROVED ERO CALL OUT SYSTEM TO SPEED AND AUTOMATE CALL OUT PROCESS

COMPLETE REVISION OF THE CORPORATE EMERGENCY PUBLIC INFORMATION RESPONSE

EMERGENCY ACTION LEVEL REVIEWS IN PREPARATION FOR NRC ACCEPTANCE OF NUMARC METHODOLOGY

INITIAL PLANNING FOR THE CONSOLIDATION OF THE PBAPS AND LIMERICK EMERGENCY PLANS

CONCLUSIONS

WE ARE PROGRESSING IN ALL AREAS OF EMERGENCY PREPAREDNESS; TRAINING, RESPONSE, AND ORGANIZATION. WE BELIEVE, HOWEVER, WE STILL HAVE A NUMBER OF IMPROVEMENTS WE STILL WANT TO ACCOMPLISH IN ORDER TO BE A WORLD CLASS PROGRAM.

THE IMPROVEMENTS WE ARE MAKING WILL APPLY THROUGHOUT THE NUCLEAR GROUP. THEY WILL BE APPLIED, AS MUCH AS POSSIBLE, TO BOTH LIMERICK AND PEACH BOTTOM.