

Review

A bimonthly publication of the Institute of Nuclear Power Operations

NOV/DEC 1993

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1993 CEO CONFERENCE

Continuing the Quest for Excellence

"A prerequisite to cost-effective performance is excellent nuclear safety performance."

— Ronald W. Watkins

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The 1993 conference, held November 3-5 in Atlanta, focused on several areas of continuing emphasis in the nuclear industry — particularly on maintaining high levels of nuclear plant safety. Speakers also discussed industry efforts to improve economic performance and work more proactively with regulators. There was also a special session on efforts to improve human performance.

The Excellence Awards presentation at the conference honored the 23 plants currently assessed in the "excellent" category as a result of INPO plant evaluations. This is the highest number since the excellence awards began in 1986.

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Nuclear Regulatory Commission

Perspectives on Nuclear Safety," with emphasis on the challenges of high level radioactive waste disposal. World Association of Nuclear Operators chairman Remy Carle gave an update on WANO activities.

The conference's first panel addressed "Maintaining High Levels of Nuclear Plant Safety." Panel moderator Ronald W. Watkins, president and CEO, Nebraska Public Power District, began the discussion by emphasizing "we must be extremely careful not to convey a cost message at the expense of a nuclear safety message. A prerequisite to cost-effective performance is excellent nuclear safety performance."

This thought was emphasized by the three panel members: William F. Hecht, chairman, president and CEO of Pennsylvania Power & Light Company; Richard A. Abdo, chairman, president and CEO of Wisconsin Electric Power Company; and Caren Byrd, vice president, Morgan Stanley and Company, Inc.

Safety essential to cost effectiveness

Participants in the Thursday afternoon panel described actions at their utilities to improve economic performance. Speakers were Roger W. Kober, chairman, president and CEO of Rochester Gas and Electric Corporation; Greg M. Rueger, senior vice president and general manager, Nuclear Power Generation Business Unit, Pacific Gas and Electric Company; and Bernard M. Fox, president and CEO, Northeast Utilities.

Rueger said that two factors are crucial for improving economic performance. One is excellent safety performance, which helps to maintain credibility and a good working relationship with regulators and the public. The other is increasing the amount of electricity generated. Fox emphasized the long-term importance of conservative decision making, even if that conservatism appears to increase costs in the short term.

Friday morning's panel, "Regulatory Relationships vis-à-vis Improved

Sullivan outlines Institute changes, urges management development efforts

"Our long-term success will be determined in large part by our ability to develop the strong managers and leaders current industry issues demand," INPO Executive Vice President Terry Sullivan told 1993 CEO conference participants.

In addition to discussing management and leadership development in the industry, Sullivan also highlighted recent INPO initiatives to assist members. He said industry-led reviews of INPO's evaluation and assistance activities and of the training and accreditation area have led to changes in the way INPO does business.

Evaluation changes include an emphasis on identifying every worthwhile improvement at a plant, a focus on selected functional areas that cut across organizational boundaries, and a closer look at efficiency and the effective use of resources. In addition, INPO senior managers are more actively following up on significant performance problems when they are identified.

Changes to the accreditation process include a reduction by half in the length of time between the accreditation self-evaluation report and the Accrediting Board review and a reduction in accreditation team size. Also, an executive summary describing a station's key training strengths and areas that warrant top management's attention has been added to the accreditation report.

Sullivan also described the examination in the past year of INPO's role in improving the economic performance of nuclear plants and subsequent discussions about INPO's mission — which he emphasized has not changed.

"It became clear that it's more important than ever to maintain INPO's focus on nuclear safety, because that sends a strong, credible message that the industry will not sacrifice safety to achieve cost reductions," said Sullivan. "And as the industry seeks more economic operation, it makes



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Selin, O'Leary address participants

Nuclear Regulatory Commission Chairman Ivan Selin discussed safety and economics from a regulatory point of view — and all four commissioners participated in the conference. Selin discussed the NRC's efforts to reduce the regulatory burden, the importance to the industry of inspecting plants that are performing less well and the NRC's work towards developing a clear and well-defined license renewal process.

Secretary of Energy Hazel O'Leary spoke on "U.S. Energy Policy and

Perspectives on Nuclear Safety," with emphasis on the challenges of high level radioactive waste disposal. World Association of Nuclear Operators chairman Remy Carle gave an update on WANO activities.

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Byrd, who served on INPO's Advisory Council for seven years, discussed the investment community's interest in nuclear safety. She noted that the financial community tends to depend on regulators to determine whether a plant is being operated safely. She also said, however, that investment decisions in regard to nuclear utilities are increasingly based on investors' perceptions of the quality of a utility's management.

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Friday morning's panel, "Regulatory Relationships vis-à-vis Improved Safety," featured four utility presidents discussing the ways their utilities have worked to improve their regulatory environments and the resulting improvements in safety and economic performance. They focused on the need for active, ongoing communication with regulators.

Conference proceedings and videotapes of selected presentations at the 1993 CEO Conference are available from the INPO documents coordinator, (404) 644-8513. ■

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Sullivan also described the examination in the past year of INPO's role in improving the economic performance of nuclear plants and subsequent discussions about INPO's mission — which he emphasized has not changed.

"It became clear that it's more important than ever to maintain INPO's focus on nuclear safety, because that sends a strong, credible message that the industry will not sacrifice safety to achieve cost reductions," said Sullivan. "And as the industry seeks more economic operation, it makes sense to take advantage of INPO's many avenues for information exchange and assistance."

Focus on management development

Sullivan focused much of his talk on the need for improved management development industrywide. "While the current group of managers

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Revised plan issued

Institutional Plan guides INPO activities

The *Institutional Plan for the Institute of Nuclear Power Operations* serves as the "foundation and the basic guideline for our activities," says INPO Executive Vice President Terry Sullivan. In November, INPO distributed to the industry a revised *Institutional Plan* that updates and replaces the previous plan issued in 1990.

The document sets forth the mission and philosophy of operation of the Institute, defines its role with its members, and describes broad organizational elements and programs. The plan is also the basis of INPO's long-term plan and annual goals and objectives.

INPO's first *Institutional Plan* was developed in 1983. Since then, the plan has been revised four times. The current revision was based on a comprehensive review process throughout the Institute, as well as review by the INPO Advisory Council and Board of Directors.

INPO's mission unchanged

This revision does not affect INPO's overall mission. "Our focus continues to be on safety and reliability," explains Sullivan. "However, the broad nature of the plan allows us the flexibility to adjust our programs to meet many emerging needs of our membership."

"In fact, the plan has been modified to emphasize INPO's role as a resource for the industry as utilities seek to improve the economic performance of their nuclear plants."

For example, the "Mission and Philosophy of Operation" section now includes the principle: "Assist members in specific areas where efficiency and the effective use of resources are complementary to the safe and reliable operation of nuclear electric generating plants."

The revision also reflects the expansion of services to the industry. For example, the description of the training and accreditation programs now includes a section that focuses on the training courses and seminars

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-Terry Sullivan

offered through the National Academy for Nuclear Training.

To complement the *Institutional Plan's* emphasis on the industry's quest for excellence, the plan's cover features a photo of the word "Excellence" being chiseled into marble.

"The revised *Institutional Plan* clearly states our intention to keep the focus on nuclear safety while continuing to be responsive to industry needs so our members get the greatest possible benefits from all INPO programs," says Sullivan. ■

Ferland challenges industry, reviews 1993 performance

The chairman of INPO's board of directors, E. James Ferland, issued a challenge to all industry delegates at this fall's CEO Conference.

"Let's all rededicate ourselves to further improving economic performance — while maintaining attention on the highest priorities of nuclear safety and reliability," said Ferland, who is chairman and CEO of Public Service Electric & Gas Company. Ferland named two methods for improving economic performance. First, he called for aggressive implementation of the industry's *Strategic Plan for Improved Economic Performance*. Second, he encouraged utility staffs to make greater use of INPO as a resource.

"The *Strategic Plan for Improved Economic Performance* squarely places lead responsibility for improving economic performance on us — the utilities," said Ferland.

"I'm sure many of you have involved your employees in developing these plants," he continued. "That's essential because those who turn the wrenches, climb the scaffolding and calibrate the instrumentation are often the ones best equipped to point out ways we can improve and save money. I urge you to continue to communicate your plans to employees — to ensure their understanding and buy-in."

Ferland reviewed the steady progress being made by the industry toward 1995 goals, as shown in the industry performance indicators. Highlights of the projected 1993 numbers include a 78.3 percent median unit capability factor, up from 76.5 in 1992. In addition, a 4.8 percent unplanned capability loss factor was projected for 1993 — a 2 percent improvement over 1992. He contrasted these figures with international performance, noting "While we are improving, you can see we could be

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doing a lot better — and we can learn a great deal from the best in the U.S. and internationally."

He also noted that the industry has performed better than the 1995 goal for generation of low-level waste for several years and is continuing to improve.

Ferland summarized his key points:

- Plants with strong operational performance have strong economic performance. Safety, reliability and economics go hand-in-hand.
- Continued wide variations in production costs and staffing levels among U.S. nuclear power stations show that plant staffs still have much to learn from each other.
- The contrast between lagging performance by some units and markedly better performance by others in the U.S. and internationally reveals that continued improvement is possible. ■

Human performance strategy to be developed

"While there has been a substantial improvement in overall nuclear plant safety and reliability, a growing proportion of plant events has human performance as a contributing cause," INPO president Zack Pate said in introducing the special session on human performance at the 1993 CEO Conference. "In part, of course, this is because we have significantly reduced other causes, such as faulty equipment and poor procedures."

He added, "We have also attacked human performance issues with a variety of initiatives, yet we haven't been as successful in solving the people issues as we have the technical issues." Because of these continuing human performance concerns, INPO is in

Advisory Council and the National Nuclear Accrediting Board.

During the spring of 1994, four working groups will meet to discuss ideas for improving human performance. Each working group will meet one day to review human performance from their experience and perspective, says Pate. The working groups' recommendations will be submitted to the review committee.

Participants in three of the working groups will be nuclear plant employees representing various working levels and utilities. Participants in the fourth working group will come from other industries such as automobile and aircraft manufacturing.

In addition to input from the working groups, the committee will study INPO reviews of human performance

Sullivan
continued from page 1

is most likely the best the nuclear industry has ever assembled, there are indications that the management bench strength may not be sufficient."

He pointed to a 40 percent turnover in senior nuclear management positions industrywide over the last two years. The majority of these changes involved senior nuclear executives, site directors and plant managers moving from one utility to another and the subsequent manage-

date into a key nuclear management position who may not have been fully ready."

While a utility's management development efforts may include a number of activities, Sullivan said "there is no substitute for thoughtful selection, critical assessment in a broad range of challenging assignments and enthusiastic role models." He said emphasis on management development will increase in plant evaluations and in seminars sponsored by the National Academy for Nuclear Training.

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He added, "We have also attacked human performance issues with a variety of initiatives, yet we haven't been as successful in solving the people issues as we have the technical issues." Because of these continuing human performance concerns, INPO is in the process of developing a strategy to improve human performance.

According to Mark Peifer, INPO Corporate Support Division Director, work on the strategy will begin with the creation of a Select Review Committee on Human Performance. This committee, which will first meet in early 1994, will include representatives from other industry groups, the INPO

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Participants in three of the working groups will be nuclear plant employees representing various working levels and utilities. Participants in the fourth working group will come from other industries such as automobile and aircraft manufacturing.

In addition to input from the working groups, the committee will study INPO reviews of human performance information developed from significant events; plant evaluations; outage reviews; and assistance visits associated with accreditation, human performance and work management.

The Select Review Committee on Human Performance is scheduled to recommend specific human performance improvement strategies to INPO senior management by mid summer. ■

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He pointed to a 40 percent turnover in senior nuclear management positions industrywide over the last two years. The majority of these changes involved senior nuclear executives, site directors and plant managers moving from one utility to another and the subsequent management changes precipitated by those moves.

"We are concerned about the management development weaknesses that prompted about a third of our member utilities to hire key nuclear managers from outside," said Sullivan, "but a broader concern is the subsequent management changes that required utilities to either hire from the outside or promote a candi-

date into a key nuclear management position who may not have been fully ready."

While a utility's management development efforts may include a number of activities, Sullivan said "there is no substitute for thoughtful selection, critical assessment in a broad range of challenging assignments and enthusiastic role models." He said emphasis on management development will increase in plant evaluations and in seminars sponsored by the National Academy for Nuclear Training.

Sullivan also reminded participants about INPO's reverse loaned employee program, a resource that can fill short-term gaps and augment an organization's management development efforts.

Reprints of Sullivan's speech are available through the INPO documents coordinator at (404) 644-8513. ■

NEW LOANED EMPLOYEES

Mike Headrick joined INPO in September as an evaluator in INPO's Operations Department. Headrick was an outage planner and scheduler at Public Service Electric & Gas Company.

Mike Korf, on loan from B&W Nuclear Technologies, is a senior project manager in INPO's Equipment Performance Department. At B&W, Korf was a maintenance engineer.

John Lewis, on loan from Georgia Power Company, joined INPO in September as an evaluator in the Operations Department. Lewis was operations department manager at Hatch Nuclear Plant.

Mark McBurnett, on loan from Houston Lighting and Power Company, is an evaluator in the Outage Department. McBurnett was integrated planning and scheduling manager at South Texas Project.

Terry Morton, on loan from Carolina Power & Light Company, is an evaluator in the Maintenance Department. Morton was maintenance manager at Shearon Harris Nuclear Power Plant.

Roland Parsons, on loan from Carolina Power & Light Company, joined INPO as an evaluator in the ALWR Standardization Project. Parsons was nuclear performance analysis manager at Carolina Power & Light.

Ashley Royal, on loan from Virginia Power, is senior project manager in the Training Implementation Department. Royal was supervisor of nuclear training at Surry Power Station. ■

DOCUMENTS ISSUED

Generic Fundamentals Test Item Catalog: PWR Operator (ACAD 89-003, Revision 3) and Generic Fundamentals Test Item Catalog: BWR Operator (ACAD 89-004, Revision 3) were issued to members and participants in December. They supersede the previous revisions, published in November 1992.

These catalogs incorporate questions from the generic fundamentals section of recent operator licensing examinations administered by the Nuclear Regulatory Commission. They are intended to serve as a resource for use in training and examining candidates for licensed operator positions.

The PWR Operator Computerized Generic Fundamentals Examination Bank and the BWR Operator Computerized Generic Fundamentals Examination Bank (ACAD 93-001 and ACAD 93-002) are currently undergoing revision to reflect the changes made in the catalogs and will be available January 29, 1994.

The Process of Accreditation of Training in the Nuclear Power Industry (ACAD 91-016, Revision 1) was issued in September.

The document has been revised to reflect changes in the accreditation process. These changes are intended to streamline and enhance the accreditation process and to improve the effectiveness and efficiency of industry training.

In addition, *Performance Indicators for the U.S. Nuclear Utility Industry (1993 Mid-Year Report)* (INPO 93-011) was issued in October. The performance indicators show industry progress toward 1995 long-term performance indicator goals.

The *1993 Survey of Nuclear-Related Employment in United States Electric Utilities* (INPO 93-07) was issued in November. This is the 10th edition of the survey, which

discusses allocation of employees among 39 occupations and reviews trends in employment, turnover, vacancies and contractor use. Also included are employment statistics for 22 functional work areas common to many nuclear utilities and information on licensed operator education, personnel scheduling practices and college recruiting projections.

INPO and ACAD (National Academy for Nuclear Training) products are mailed to each member and participant administrative point of contact (APOC). Please check with your APOC before requesting a document directly from INPO. For further information, call the INPO documents coordinator at (404) 644-8513. ■

CATALOG LISTS TRAINING RESOURCES

The new *Training Resources Catalog* (ACAD 93-014) describes training materials that utilities are willing to share with other utilities.

"Sharing training resources can help improve the overall effectiveness of training throughout the nuclear utility industry," says Bill Subalasky, executive director of the National Academy for Nuclear Training. "Sharing can also help our members develop, revise and use training materials more efficiently."

The catalog contains more than 350 items, including computer-based training, videotapes and mock-ups. Items in the catalog are sorted by title, subject, type of training material and utility.

For example, to find out about interactive videodiscs produced by other utilities, look up the material type "Interactive videodisc." The catalog lists 28 examples, ranging from surrogate plant tours to pipe fitting instructions. Similarly, under training

materials related to valves you would find 15 entries, most of them mock-ups of various types of valves.

For each entry, there is a detailed description and a contact person at the utility. Training departments can share these items with other utilities by sending a copy or by allowing other utilities to use their facilities.

The catalog will be revised based on utility feedback. Forms are provided in the back of the catalog for feedback and to identify materials for future issues of the catalog. ■

NRC DATA BASE DISCONTINUED

A recent periodic assessment of INPO computer data bases and applications showed that use of the Nuclear Regulatory Commission (NRC) Index data base decreased substantially over the past several years.

The current level of use does not justify the cost to retain this data base, according to Angie Howard, Industry Relations and Information Services vice president. Therefore, the NRC Index data base will be eliminated from the INPO computer effective December 31, 1993.

The NRC Index data base lists the holdings in the NRC Public Document Room. It is used to perform bibliographic searches, like using a library card catalog. Similar services are offered by the NRC Public Document Room.

Several alternatives to INPO's NRC Index data base are available directly from the NRC or other U.S. government sources. Says Howard, "We believe INPO's NRC Index data base can be eliminated without major inconvenience to our members and participants and with significant computer software cost savings to the Institute."

For further information, contact INPO Records Center Supervisor Pat Lewis at (404) 644-8697. ■

NEW LIAISON ENGINEERS



Ilan Taylor of Nuclear

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Comments or suggestions for future articles:

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NEW LIAISON ENGINEERS

Allan Taylor of Nuclear Electric plc in Great Britain began his INPO assignment as a liaison engineer in the Plant Evaluation Division in November. Taylor was operational support manager at Nuclear Electric.

Colin Bromley of Ontario Hydro began an assignment to the World Association of Nuclear Operators-Atlanta Center as a liaison engineer in September. He was superintendent of quality improvement at Bruce B Nuclear Generating Station. ■

EVENT REPORTS ISSUED

Significant Event Evaluation and Information Network (SEE-IN) documents recently issued include:

Significant Event Notification (SEN) 104: Recurring Events: July-September 1993 describes 11 significant events from the third quarter of 1993. These events are similar to past events for which the lessons learned were previously shared with the industry.

SEN 105: Unanticipated Reactor Recirculation Jet Pump Failure During Power Operation describes the failure of a jet pump hold-down beam at a boiling water reactor. The hold-down beam cracked and failed near its end, a failure location not previously observed in the industry. Degradation of the

hold-down beam prior to failure was not detected by on-line daily testing, as was anticipated. Ultrasonic testing of the beam performed during plant outages did not identify the cracking because the failure location was not considered an area susceptible to cracking.

SEN 106: Recurring Event: Unexpected Reactivity Additions While Placing Primary Demineralizers in Service describes three events at pressurized water reactors in which reactor coolant system boron concentration unexpectedly changed after primary system demineralizers were placed in service. Chemistry samples had not been taken prior to placing the demineralizers in service to verify proper boron saturation conditions. These events are similar to past events for which the lessons learned were previously shared with the industry.

Significant Event Report (SER) 23-93: Delayed Manual Scram Following a Core Flow Reduction Event and

Entry into a Region of Core Instability describes an event in which both reactor recirculation pumps unexpectedly downshifted to low speed, placing the reactor in a region of operating domain susceptible to core thermal-hydraulic instability. The reactor was manually scrammed later than required by procedure.

SER 24-93: HPCI Turbine Exhaust Diaphragm Rupture Resulting in Personnel Injury describes the rupture of high pressure coolant injection turbine exhaust line rupture diaphragms during the performance of a pump operability test. Condensation that was not drained from the HPCI turbine steam supply line and turbine casing caused the rupture. Steam released through the ruptured diaphragms injured five workers and damaged equipment.

SER 25-93: Inadequate Control of Reactor Water Level at a Shutdown PWR describes an event in which inattention during activities involving draining reactor coolant from the reactor vessel resulted in an unanticipated reduction in indicated reactor water level. Lessons learned from previous industry and site events were not taken advantage of to possibly prevent recurrence.

SER 26-93: Main Turbine Damage Induced by Torsional Vibration describes an event at an operating BWR in which several low pressure stage turbine blades failed due to cyclic fatigue induced by resonant torsional vibration. Extensive damage to the low pressure turbine and its associated condenser was induced by transmission grid imbalances that were within normal operating parameters. The lessons learned are applicable to all turbine designs.

SER 27-93: Inappropriate Use of As-Left Control Rod Scram Time Test Data describes the discovery that a control rod array had failed to meet its maximum allowable insertion time requirement during an earlier surveillance test. Reactor operation had continued despite the requirement to shut down in this condition because plant personnel misinterpreted technical specifications and misapplied the test data from the surveillance.

SER 28-93: Increased Leakage from an Unisolable Reactor Coolant Leak after Repeated Sealant Injections describes a situation in which increasing reactor coolant leakage from an unisolable letdown system manual valve occurred over 60 days and led to a forced reactor shutdown. Prior to the shutdown, 30 consecutive sealant

Significant by Others Report 93-03: July-September 1993 lists two significant items reported to the industry in documents produced by other organizations during the third quarter of 1993. One item describes the possibility that changes in ambient temperatures may affect the output torque of some motor-operated valve actuators; the other describes a diesel generator failure due to inadequate ventilation and cooling of electrical circuits.

Operation and Maintenance Reminder (O&MR)402: Freezing of Safety-related Process Piping discusses prior process-system freezing events in the industry and provides reminders regarding preparations for cold weather.

SEE-IN products are transmitted to each member utility and participant using NUCLEAR NETWORK®. Please check with your SEE-IN or NETWORK® contact to request these documents. ■

ACCREDITATION RESULTS

The National Nuclear Accrediting Board, meeting October 20-21 in Atlanta, renewed the accreditation of 12 programs at two plants. The Board also met November 17-18 and renewed the accreditation of 24 programs at four additional plants. ■

OCTOBER ACCREDITATION RENEWALS

San Onofre Nuclear
Generating Station
Southern California Edison
Company
6 programs

Arkansas Nuclear One
Entergy Operations, Inc.
6 programs

NOVEMBER ACCREDITATION RENEWALS

Diablo Canyon Power Plant
Pacific Gas and Electric
Company
6 programs

Pilgrim Nuclear
Power Station

MSPDS SEMINAR GRADUATES

Nine maintenance supervisors attended the second pilot Maintenance Supervisor Professional Development Seminar October 17-29.

The new seminar, conducted by the National Academy for Nuclear Training, augments utility professional development for maintenance supervisors. The seminar, which includes an industry mentor for the first week, uses case studies, presentations by participants and other exercises to encourage interaction among seminar members.

Graduates of the November seminar are:

Khin Chea
I&E Section Manager
Oconee Nuclear Station

James V. Kawa
I&C Supervisor
St. Lucie Nuclear Power Plant

James J. McCann
I&C Supervisor
Diablo Canyon Power Plant

Robert A. Morris
Electrical Supervisor
WNP-2

Michael P. Murray
I&C Supervisor
South Texas Project Electric
Generating Station

Sidney C. Powell
Manager, Nuclear Electric Shop
Crystal River Unit 3

William A. Schmitt
I&C Supervisor
Hope Creek Generating Station

Austin P. Turbeville
Mechanical Supervisor
V.C. Summer Nuclear Station

John E. Whitt
Mechanical Maintenance Supervisor
Browns Ferry Nuclear Plant

The industry mentor for this seminar was Terry Beilman, maintenance superintendent, D.C. Cook Nuclear Plant. ■



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James V. Kawa
I&C Supervisor
St. Lucie Nuclear Power Plant

James J. McCann
I&C Supervisor
Diablo Canyon Power Plant

Michael P. Murray
I&C Supervisor
South Texas Project Electric
Generating Station

Sidney C. Powell
Manager, Nuclear Electric Shop
Crystal River Unit 3

William A. Schmick
I&C Supervisor
Hope Creek Generating Station

Austin P. Turbeville
Mechanical Supervisor
V.C. Summer Nuclear Station

John E. Whittr
Mechanical Maintenance Supervisor
Browns Ferry Nuclear Plant

The industry mentor for this seminar was Jerry Beilman, maintenance superintendent, D.C. Cook Nuclear Plant. ■



Graduates of the October Maintenance Supervisor Professional Development Seminar are, from left, Robert A. Morris, James V. Kawa, James J. McCann, John E. Whittr, Michael P. Murray, Sidney C. Powell, William A. Schmick, Khin Chea and Austin P. Turbeville.

an event at an operating BWR in which several low pressure stage turbine blades failed due to cyclic fatigue induced by resonant torsional vibration. Extensive damage to the low pressure turbine and its associated condenser was induced by transmission grid imbalances that were within normal operating parameters. The lessons learned are applicable to all turbine designs.

SER 27-93: *Inappropriate Use of As-left Control Rod Scram Time Test Data* describes the discovery that a control rod array had failed to meet its maximum allowable insertion time requirement during an earlier surveillance test. Reactor operation had continued despite the requirement to shut down in this condition because plant personnel misinterpreted technical specifications and misapplied the test data from the surveillance.

SER 28-93: *Increased Leakage from an Unisolable Reactor Coolant Leak after Repeated Sealant Injections* describes a situation in which increasing reactor coolant leakage from an unisolable letdown system manual valve occurred over 60 days and led to a forced reactor shutdown. Prior to the shutdown, 30 separate sealant injections were made into the valve in repeated attempts to control recurring leakage.

SER 5-93, Supplement 1: *Reactor Pressure-Temperature Limits Exceeded* describes two additional events in which reactor pressure-temperature limits were exceeded following losses of reactor recirculation flow at BWRs due to thermal stratification of reactor coolant and insufficient monitoring of reactor conditions.

20-21 in Atlanta, renewed the accreditation of 12 programs at two plants. The Board also met November 17-18 and renewed the accreditation of 24 programs at four additional plants. ■

OCTOBER ACCREDITATION RENEWALS

San Onofre Nuclear
Generating Station
Southern California Edison
Company
6 programs

Arkansas Nuclear One
Entergy Operations, Inc.
6 programs

NOVEMBER ACCREDITATION RENEWALS

Diablo Canyon Power Plant
Pacific Gas and Electric
Company
6 programs

Pilgrim Nuclear
Power Station
Boston Edison Company
6 programs

St. Lucie Nuclear
Power Plant
Florida Power & Light
Company
6 programs

Beaver Valley Power Station
Duquesne Light Company
6 programs

REVERSE ASSIGNMENTS

Tom Reeder, accreditation team manager, Organization and Administration Department, joined New York Power Authority as a reverse loaned employee November 15. Reeder is training manager at Indian Point 3. ■

HEMBREE NAMED INPO CORPORATE SECRETARY

The INPO Board of Directors elected David Hembree as corporate secretary effective December 1, 1993. Hembree, staff assistant to the president, has served the Institute more than 10 years, most recently in the Plant Analysis Department. ■

SENIOR NUCLEAR MANAGERS REFINE SKILLS AT COURSE



Graduates of the recent Senior Nuclear Plant Management Course are, from left, Randall K. Edgington, Gregory D.D. Smith, Michael Peckham, Myra E. Burgess, Kevin L. Ostrowski, Donald E. Jernigan, Predrag Sirola, John J. Curry, Paul Fessler and Dean L. Tibbits.

The Senior Nuclear Plant Management Course refines the skills required to successfully handle problems typically encountered in nuclear plant management. Ten participants recently graduated from the five-week course, the 28th since the course began in 1986.

Including these recent graduates, 260 nuclear professionals have completed the course. More than half of current U.S. plant managers are graduates of the Senior Nuclear Plant Management Course.

Graduates of the October 10-November 12 course are:

Myra E. Burgess
Technical Services Superintendent
Commonwealth Edison Company

John J. Curry
Chief Technical Engineer

Kevin L. Ostrowski
Unit 1 Operations Manager
Beaver Valley Power Station

Michael Peckham
General Manager - Operations
Indian Point 3

Predrag Sirola
Plant Manager
Krsko Nuclear Plant
Slovenia

Gregory O.D. Smith
Operations Manager
WNP-2

Dean L. Tibbits
Manager - Operations
Shearon Harris Nuclear Power Plant

Industry mentors for the course were Michael S. Tuckman, senior vice president, nuclear operations,

RECENT SEMINAR GRADUATES

The seventh session of the Shift Supervisor Professional Development Seminar for 1993 was held September 19-October 1 and the eighth session was held November 7-19. Nine participants graduated from the seventh seminar and 10 graduated from the eighth.

The seminar, conducted by the National Academy for Nuclear Training, augments utility professional development for new operations shift supervisors. Seminar attendance is a commitment utilities have made as part of accreditation for shift supervisor training programs.

September seminar graduates are:

Donald W. Bain III

Brunswick Steam Electric Plant

Johnny R. Burke

V.C. Summer Nuclear Station

William Durr Jr.

Indian Point Station Unit 2

Richard J. Fiedler

Monitcello Nuclear Generating Plant

Jesse D. Hackenberg

Susquehanna Steam Electric Station

Jeffrey L. Kreil

Pompeo Beach Nuclear Plant

Brian K. Mutz

D.C. Cook Nuclear Plant

Michael Perito

Pilgrim Nuclear Power Station

Ronald G. Strickland

Seabrook Station

The industry mentor for this seminar was Mark B. Bezilla, operations manager, Perry Nuclear Power Plant.

November graduates are:

John O. Dalton

Maine Yankee Atomic Power Plant

Randall D. Golden

Arkansas Nuclear One

David S. Jester

Brunswick Steam Electric Plant

Ronald K. McIntire

Seabrook Station

Kevin J. Morgan

Duane Arnold Energy Center

Michael A. Peters

LaSalle County Station

Gerald J. Radishofski

Susquehanna Steam Electric Station

James G. Snowden

Oconee Nuclear Station

James A. Stortz

Quad Cities Station

Robert W. Walstrom

Monitcello Nuclear Generating Plant

The industry mentor for this seminar was Don Vinci, operations superintendent, Waterford 3 Steam Electric Station. ■



Graduates of the seventh Shift Supervisor Professional Development Seminar are, from left, Johnny R. Burke, Brian K. Mutz, Jeffrey L. Kreil, Ronald G. Strickland, Jesse D. Hackenberg, Michael Perito, William Durr Jr., Donald W. Bain III and Richard J. Fiedler.



Graduates of the recent Senior Nuclear Plant Management Course are, from left, Randall K. Edington, Gregory O.D. Smith, Michael Peckham, Myra E. Burgess, Kevin L. Ostrowski, Donald E. Jernigan, Predrag Sirolo, John J. Curry, Paul Fessler and Dean L. Tibbitts.

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Randall K. Edington
Plant Manager Unit 2
Arkansas Nuclear One

Paul Fessler
Technical Manager
Fermi 2 Nuclear Station

Donald E. Jernigan
Operations Manager
Turkey Point Nuclear Power Plant

Kevin L. Ostrowski
Unit 1 Operations Manager
Beaver Valley Power Station

Michael Peckham
General Manager-Operations
Indian Point 3

Predrag Sirolo
Plant Manager
Koko Nuclear Plant
Slovenia

Gregory O.D. Smith
Operations Manager
WNP-2

Dean L. Tibbitts
Manager-Operations
Sharon Harris Nuclear Power Plant

Industry mentors for the course were Michael S. Tuckman, senior vice president, nuclear generation department, Duke Power Company; Wayne D. Romberg, vice president, nuclear, operations services, Northeast Utilities; and Roy A. Anderson, vice president, Brunswick Steam Electric Plant, Carolina Power & Light Company. ■



Graduates of the seventh Shift Supervisor Professional Development Seminar are, from left, Johnny R. Burke, Brian K. Mutz, Jeffrey L. Kroll, Ronald G. Strickland, Jesse D. Hackenberg, Michael Parito, William Durr Jr., Donald W. Bain III and Richard J. Fiedler.



Graduates of the eighth Shift Supervisor Professional Development Seminar are, from left, Robert W. Walstrom, David S. Jester, Ronald K. McIntire, James A. Stortz, Michael A. Peters, Gerald J. Radshafski, Randall D. Golden, John O. Dalton, Kevin J. Morgan and James G. Snowden.

Who Do You Call

It was just one of those Fridays. Clinton Power Station's industry information coordinator, Tim Donovan, was informed that an unusual event had been declared due to a fire in the charcoal filter of the off-gas system.

"We realized we were dealing with an unknown situation and needed help," Donovan recalls. He called Kae Timberlake, who coordinates NUCLEAR NETWORK®, the computerized messaging system operated by INPO. Timberlake suggested that, in addition to transmitting a message describing the event, Donovan request assistance under the HOTLINE topic. She also added a note on the initial NUCLEAR NETWORK screen referring users to Clinton's request for assistance.

"Within a half hour, we were getting calls. We had every fax machine

on the site busy," says Donovan. "It was phenomenal. We had to move in extra tables to sort the information."

Information coming to INPO was relayed to Clinton, and INPO personnel also sent suggestions and lists of contacts. "People from other plants volunteered to come and help. Here it was a Friday morning, and some of the people who called gave us their home phone numbers and said 'Don't hesitate to call me over the weekend.'"

While this flood of information proved to be all the help Clinton needed during the May 22, 1992, incident, more extensive help, such

as personnel and materials, can be provided by other utilities under the terms of voluntary agreements signed by all nuclear utilities. These letters of agreement, signed in 1982, outline the relationships between utilities that provide help to others during an emergency.

Each nuclear utility has signed two agreements: "Voluntary Assistance Agreement By and Among Electric Utilities Involved in Transportation of Nuclear Materials" and the "Nuclear Power Plant Emergency Response Voluntary Assistance Agreement." These agreements do not impose any obligations on the utilities, but outline the terms and conditions under which such assistance, if volunteered, will be provided and received.

Maintaining these agreements is part of the assistance INPO offers in identifying and mobilizing the resources of the nuclear industry in the event of an emergency. During an emergency, INPO can help the affected utility by:

- Facilitating the flow of utility-approved information to the nuclear industry through NUCLEAR NETWORK
- Obtaining technical information and industry experience regarding plant components and systems through the Nuclear Plant Reliability Data System
- Locating equipment
- Locating personnel with specific technical expertise
- Providing other utility-requested assistance within the limits of INPO resources and capabilities.

To support these functions, INPO maintains a dedicated emergency response center and notification system that can reach appropriate INPO staff members 24 hours a day.

The industry response to the event made the people at Clinton believers. Says Tim Donovan, "The amount of help we got was unbelievable. People were willing to drop everything and help if we needed them." ■

Review

Volume 2, Number 6
November/December 1993

Review is published bimonthly by the Institute of Nuclear Power Operations for its members, participants and other interested groups.

Ginger Kaderabek, Editor
Jim Caulk, Art Director
Karen Johnson, Production

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ISSN 1061-6411

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 8, 1994

MEMORANDUM FOR: Darlene Huyer
Anstec, Inc.

FROM: Tremaine Donnell, INPO Coordinator
Records and Archives Services Section
Information and Records Management Branch
Division of Information Support Services

SUBJECT: ESTABLISHMENT OF DATA RECORD FOR INPO
DOCUMENTS

The Records and Archives Services Section has received the attached INPO Document.

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Tremaine Donnell

Tremaine Donnell, INPO Coordinator
Records and Archives Services Section
Information and Records Management Branch
Division of Information Support Services, IRM

Enclosure: As stated

PLEASE NOTE: Hard copy is available from the NRC File Center.

cc: JDorsey