

Recd 9/28  
3:00pm

24 September 1984

Mr. Hugh L. Thompson, Director  
Division of Human Factors Safety  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Reactor Regulation  
Washington, D.C. 20555

Dear Hugh:

Reference is made to your letter to me dated 17 September 1984 requesting my views on several matters relating to proposed NRC rulemaking for training and qualifications of civilian nuclear power plant personnel (SECY-84-76).

I wish to address the first paragraph of your letter wherein you indicate that "we have been told that you have indicated a belief that a rule is not necessary." I can think of only two occasions in which I have publicly discussed the proposed rulemaking and industry's concerns. One of these occasions was in a paper entitled, "INPO Accreditation: A Board Member's Perspective," which I presented at the 1984 Annual Meeting of the ANS in New Orleans in June 1984 (copy attached). Although I made a modestly snide remark about the proposed rule (page 3), I did not take any position on whether a rule is necessary. The second occasion was in a letter to you dated 27 April 1984 responding to your request for comments (copy attached). My third comment was: "Whether the NRC position should be made through rulemaking or by policy statement, and whether one or the other is permitted or required by Section 306 of P.L. 97-425 are matters that I am not prepared to address." My position remains unchanged on this point, as I believe that a determination of what is required or necessary according to Section 306 is a legal question that should best be addressed by OELD, OGC and others.

However, putting aside the legal question of whether a rule is necessary, I do have some additional views on the question from a policy standpoint. In my penultimate comment to you on 27 April I indicated:

In summary, in light of what I sincerely believe are laudable utility industry initiatives for the improvement of training, I recommend that at this time the Commission act in a manner which results in a minimum amount of requirements, a limited amount of prescriptive guidance, a prudent amount of monitoring, and a maximum amount of encouragement for continued utility initiatives towards attaining quality in training and excellence in nuclear power plant operations.

The above comment was intended to be a pleading for promulgating only minimum requirements through a rule, if a rule is legally necessary under Section 306. From a policy perspective, my position remains the same.

FOIA 87-787

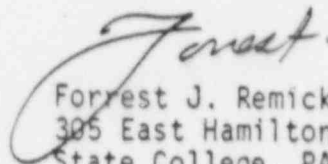
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24 September 1984

The reasons I recommend minimum requirements in any rule that might be found necessary under Section 306 are the following. INPO and the nuclear utility industry are striving to attain quality in training that goes beyond meeting the minimum requirements of a prescriptive regulation. If the NRC comes along and codifies into requirements the voluntary commitments, it is argued that the nuclear utility industry support of INPO would be destroyed. Although I do not know if this would occur, it is a risk that I recommend strongly against taking. I have observed support for INPO accreditation grow over the past two years. Further, I have had occasion to personally observe what this support has accomplished from the standpoint of utility commitments towards training facilities, training staffs and the quality of training programs; not only for licensed personnel, but also for other nuclear facility personnel. Rules and regulations would not have produced this support or this commitment. To unwittingly destroy this support and commitment would be regulatory foolhardiness. As I indicated to you on 27 April: "To destroy this initiative would set back training program improvements to pre-TMI-2 accident days."

You asked me also to provide comments on the various merits or problems underlying the three proposed versions contained in SECY 84-76A and SECY 84-76B (Alternatives I and II). Because of a need to divert my time to prepare for providing testimony to Congress on the HEU/LEU conversion question for non-power reactors, I will provide my comments on SECY 84-76A & B at a later date.

Sincerely yours,

  
Forrest J. Remick  
305 East Hamilton Avenue  
State College, PA 16801

FJR:gc

cc: R. F. Fraley, ACRS  
Z. T. Pate, INPO

Attachments

INPO ACCREDITATION  
A BOARD MEMBER'S PERSPECTIVE

1984 ANNUAL MEETING  
THE AMERICAN NUCLEAR SOCIETY  
NEW ORLEANS, LOUISIANA  
JUNE 3-8, 1984

BY

FORREST J. REMICK  
THE PENNSYLVANIA STATE UNIVERSITY

- . IN AUGUST 1983, A MILESTONE WAS REACHED AT THE INSTITUTE OF NUCLEAR POWER OPERATIONS (INPO) WHEN THE FIRST UTILITY TRAINING PROGRAMS WERE ACCREDITED.
- . LICENSED OPERATOR TRAINING, NON-LICENSED OPERATOR TRAINING, LICENSED OPERATOR REQUALIFICATION TRAINING AND SHIFT TECHNICAL ADVISOR TRAINING PROGRAMS WERE ACCREDITED FOR DUKE POWER COMPANY'S OCONEE NUCLEAR STATION.
- . ACCREDITATION FOLLOWED IN JANUARY 1984 FOR THREE TRAINING PROGRAMS AT ARKANSAS POWER AND LIGHT COMPANY'S ARKANSAS NUCLEAR ONE AND FOR EIGHT TRAINING PROGRAMS AT TENNESSEE VALLEY AUTHORITY'S SEQUOYAH NUCLEAR PLANT.
- . AND IN MAY 1984 THREE TRAINING PROGRAMS WERE ACCREDITED AT CAROLINA POWER AND LIGHT COMPANY'S H. B. ROBINSON STEAM ELECTRIC PLANT AND AT BALTIMORE GAS AND ELECTRIC COMPANY'S CALVERT CLIFFS NUCLEAR POWER PLANT.
- . THUS, 21 TRAINING PROGRAMS AT 5 PLANTS OR STATIONS HAVE BEEN ACCREDITED TO DATE, AND THE INPO ACCREDITATION PROGRAM IS WELL UNDERWAY.
- . THE INSTITUTE OF NUCLEAR POWER OPERATIONS WAS ESTABLISHED BY THE NUCLEAR UTILITY INDUSTRY IN ORDER TO PURSUE AND ATTAIN QUALITY AND EXCELLENCE IN NUCLEAR POWER PLANT OPERATION.

- . THE PURPOSE OF INPO'S ACCREDITATION PROGRAM IS TO ASSIST MEMBER UTILITIES, WHICH INCLUDES ALL U.S. NUCLEAR UTILITIES, IN DEVELOPING TRAINING PROGRAMS THAT WILL PROVIDE WELL-QUALIFIED, COMPETENT PERSONNEL WHO WILL OPERATE THEIR NUCLEAR POWER PLANTS WITH QUALITY AND EXCELLENCE.
- . INPO HAS ESTABLISHED CRITERIA FOR:
  - .. TRAINING PROGRAMS
    - PROGRAM CONTENT
    - TRAINEE EVALUATION AND QUALIFICATION METHODS
  - .. TRAINING PROCESS
    - ORGANIZATION AND ADMINISTRATION
    - RESOURCES AND FACILITIES
    - PROGRAM DEVELOPMENT AND IMPLEMENTATION
  - .. TRAINING STAFF
    - SIZE AND WORKLOAD
    - QUALIFICATIONS
    - DEVELOPMENT AND EVALUATION
- . TO OBTAIN ACCREDITATION, A UTILITY MUST DEMONSTRATE THAT ITS TRAINING MEETS THESE INPO ACCREDITATION CRITERIA.
- . INPO ASSISTS ITS MEMBERS IN DEVELOPING TRAINING PROGRAMS WHICH ARE BASED ON A CLOSED-LOOP, SYSTEMATIC APPROACH AND WHICH WILL MEET THESE CRITERIA.
- . THE PROGRAMS MUST BE PERFORMANCE-BASED. THAT IS, THEY MUST BE BASED ON AN ANALYSIS OF THE JOBS, TASKS, SKILLS AND KNOWLEDGE REQUIRED FOR THE JOB POSITION THAT THE TRAINEE WILL OCCUPY.

- . THE INPO APPROACH AND CRITERIA ARE GENERALLY CONSISTENT WITH THE SYSTEMS APPROACH TO TRAINING (SAT) WHICH THE NUCLEAR REGULATORY COMMISSION IS CONSIDERING FOR PROMULGATION AS A MODIFICATION OF 10 CFR PART 50.
- . HOWEVER, INPO ACCREDITATION CURRENTLY INCLUDES TEN TRAINING PROGRAMS, WHEREAS EARLY DRAFTS OF THE NRC PROPOSED RULE INCLUDED TRAINING PROGRAMS FOR THE TWENTY-FIVE JOB POSITIONS LISTED IN APPENDIX B OF ANSI/ANS-3.1--1981.
- . THE NRC PROPOSED RULE INCLUDED ESSENTIALLY ALL PERSONNEL AT A NUCLEAR POWER PLANT EXCEPT CLERICAL AND JANITORIAL POSITIONS.
- . THE TEN TRAINING PROGRAMS CURRENTLY COVERED BY INPO INCLUDE:
  - .. OPERATIONS AREA
    - NON-LICENSED OPERATORS
    - LICENSED OPERATORS
    - LICENSED OPERATOR REQUALIFICATION
  - .. MAINTENANCE AND TECHNICAL SUPPORT AREA
    - SHIFT TECHNICAL ADVISOR
    - INSTRUMENT AND CONTROL TECHNICIAN
    - ELECTRICAL MAINTENANCE PERSONNEL
    - MECHANICAL MAINTENANCE PERSONNEL
    - CHEMISTRY TECHNICIAN
    - RADIOLOGICAL PROTECTION TECHNICIAN
    - MANAGER AND TECHNICAL STAFF

- . I INDICATED THAT TO BE ACCREDITED, TRAINING PROGRAMS MUST BE BASED ON A SYSTEMATIC APPROACH. IN GENERAL, THIS MEANS THAT THEY MUST CONTAIN THE FOLLOWING ESSENTIAL INGREDIENTS:
  - .. A SYSTEMATIC ANALYSIS OF JOBS TO DETERMINE WHAT TASKS THE PERFORMER OF THE JOB MUST BE ABLE TO PERFORM.
  - .. PERFORMANCE-BASED LEARNING OBJECTIVES DERIVED FROM THE ANALYSIS.
  - .. TRAINING DESIGNED, DEVELOPED AND IMPLEMENTED TO ACHIEVE THE PERFORMANCE-BASED OBJECTIVES.
  - .. EVALUATION OF TRAINEES CONDUCTED DURING TRAINING. SUCH EVALUATION SHOULD BE MADE AGAINST PERFORMANCE STANDARDS STATED IN THE LEARNING OBJECTIVES.
  - .. EVALUATION OF THE EFFECTIVENESS OF THE TRAINING PROGRAM. SUCH EVALUATION SHOULD INCLUDE PROVISIONS FOR REVISION BASED ON TRAINEES' DEMONSTRATED ABILITY TO PERFORM IN ACTUAL JOB SETTING.
- . TRAINING SYSTEM MANAGEMENT MODELS THAT GENERALLY CONTAIN THESE INGREDIENTS INCLUDE INSTRUCTIONAL SYSTEM DEVELOPMENT (ISD), TRAINING SYSTEM DEVELOPMENT (TSD), CRITERION REFERENCED INSTRUCTION (CRI), THE NRC'S PROPOSED SYSTEMS APPROACH TO TRAINING (SAT), ETC.
- . INPO'S ACCREDITATION PROCESS HAS THREE MAJOR PARTS:
  - .. ACCREDITATION SELF-EVALUATION
    - CONDUCTED BY THE UTILITY
    - RESULTS IN SELF-EVALUATION REPORT (SER)
  - .. ACCREDITATION TEAM EVALUATION
    - CONDUCTED BY INPO AND PEER EVALUATORS
    - RESULTS IN ACCREDITATION REPORT
  - .. ACCREDITATION DECISION BY ACCREDITING BOARD



- . THE MEMBERSHIP OF THE ACCREDITING BOARD CONSISTS OF FIVE MEMBERS AS FOLLOWS:

- .. TWO MEMBERS FROM INPO MEMBER UTILITIES

- BILLY R. CLEMENTS, VICE PRESIDENT, NUCLEAR,  
TEXAS UTILITIES GENERATING COMPANY

- CORDELL REED, VICE PRESIDENT, COMMONWEALTH EDISON  
COMPANY, CHAIRMAN OF THE ACCREDITING BOARD

- .. ONE MEMBER FROM A NON-NUCLEAR, INDUSTRIAL TRAINING ORGANIZATION  
JOHN E. CARROLL, UNITED AIRLINES (RET.)

- .. ONE MEMBER FROM THE POST-SECONDARY EDUCATION COMMUNITY

- RUSSELL R. O'NEILL, DEAN OF ENGINEERING AND APPLIED  
SCIENCE (RET.), UNIVERSITY OF CALIFORNIA AT LOS ANGELES

- .. ONE MEMBER RECOMMENDED BY THE NRC

- FORREST J. REMICK, ASSISTANT VICE PRESIDENT FOR  
RESEARCH AND GRADUATE STUDIES, THE PENNSYLVANIA  
STATE UNIVERSITY

- . IN ADDITION, EACH ACCREDITING BOARD MEMBER HAS AN ALTERNATE. THE ALTERNATE MEMBERS IN THE SAME ORDER ARE:

- .. DENNIS E. GILBERTS, SENIOR VICE PRESIDENT, NORTHERN STATES  
POWER COMPANY

- SAMUEL J. TUTHILL, SENIOR VICE PRESIDENT, IOWA-ELECTRIC  
LIGHT AND POWER COMPANY

- .. CHARLES J. SENER, ASSISTANT VICE PRESIDENT, BELL  
COMMUNICATIONS RESEARCH, INC.

- .. WILLIAM R. KIMEL, DEAN, COLLEGE OF ENGINEERING, UNIVERSITY  
OF MISSOURI-COLUMBIA

- .. GORDON E. ROBINSON, ASSOCIATE PROFESSOR OF NUCLEAR  
ENGINEERING, THE PENNSYLVANIA STATE UNIVERSITY

- . WHEN ACCREDITATION IS AWARDED, THE ACCREDITATION WILL NORMALLY REMAIN IN EFFECT FOR FOUR YEARS, WITH A REPORT SUBMITTED TO THE INPO ACCREDITING BOARD FOR APPROVAL AT THE END OF TWO YEARS.

- . IT IS MY VIEW THAT IF A UTILITY IS TO REAP THE POTENTIAL FULL BENEFITS OF THE ACCREDITATION PROCESS, IT MUST MAKE IT ABUNDANTLY CLEAR AT THE ONSET THAT:
  - .. EXCELLENCE IN NUCLEAR POWER PLANT OPERATION IS THE GOAL OF THE UTILITY.
  - .. EXCELLENCE WILL BE ATTAINED THROUGH THE QUALITY OF PLANT OPERATION PERSONNEL AND THROUGH THE QUALITY OF THEIR TRAINING.
  - .. THE ACCREDITATION PROCESS WILL BE UTILIZED FULLY TO DEVELOP AND EVALUATE THE QUALITY OF THE TRAINING PROGRAMS.
  - .. A CONSCIENTIOUS, THOROUGH, OPEN AND HONEST SELF-EVALUATION WILL BE MADE OF THE QUALITY OF THE TRAINING PROGRAMS AND HOW WELL THEY MEET THE INPO CRITERIA.
  - .. THE SELF-EVALUATION REPORT WILL TELL IT AS IT IS.
  - .. WEAKNESSES OR SHORTCOMINGS WILL BE ADDRESSED AND CORRECTIVE ACTION WILL BE INITIATED IMMEDIATELY.
- . I BELIEVE THAT IF WELL-DONE, SELF-EVALUATION IS THE MOST IMPORTANT PART OF THE ACCREDITATION PROCESS.
- . HOWEVER, TO BE WELL DONE, SOME OF THE MOST VALUABLE PLANT OPERATIONS PERSONNEL MUST BE A PART OF THE SELF-EVALUATION TEAM. THE TEAM SHOULD NOT CONSIST SOLELY OF TRAINING PERSONNEL.
- . FURTHER, THE SELF-EVALUATION TEAM MUST BE TOUGH; THEY MUST BE TOUGHER THAN AN NRC INSPECTOR, TOUGHER THAN AN INPO EVALUATOR.
- . A WELL-DONE SELF-EVALUATION WILL REQUIRE A MAJOR EFFORT. HOWEVER, THE GREATER THE EFFORT REQUIRED, THE MORE IT IS PROBABLY NEEDED.
- . AS PART OF THE SELF-EVALUATION, IT IS IMPORTANT THAT IN-DEPTH QUESTIONS BE ADDRESSED. A DESCRIPTION OF WHAT IS BEING DONE BY WHOM TO WHOM IS FAR FROM BEING ADEQUATE.



. QUESTIONS SHOULD INCLUDE:

- .. WHAT IS THE TRAINING PROGRAM SPECIFICALLY ATTEMPTING TO ACCOMPLISH?
  - .. THAT IS, WHAT KNOWLEDGE AND SKILLS MUST PLANT PERSONNEL POSSESS TO PERFORM THE TASKS OF THEIR JOB?
  - .. IS THE TRAINING PROGRAM EFFECTIVELY DESIGNED TO ENABLE PLANT PERSONNEL TO ACQUIRE THE KNOWLEDGE AND SKILLS?
  - .. WHAT ARE THE HONEST STRENGTHS AND SUCCESSES OF THE TRAINING PROGRAMS? THESE SHOULD BE ENUMERATED.
  - .. WHAT ARE THE WEAKNESSES, LIMITATIONS AND INADEQUACIES? (E.G., DO THE RESULTS OF THE TRAINING PROGRAM MEET THE TRUE DESIRES OF THE TRAINING STAFF AND THE OPERATIONS STAFF? ARE THEY TRULY SATISFIED WITH THE PRODUCT?)  
IF NOT, OPENLY ADMIT IT. HOWEVER, CORRECTIVE ACTION SHOULD BE UNDERTAKEN IMMEDIATELY. ONE SHOULD NOT WAIT FOR INPO TO POINT OUT THE INADEQUACIES.
  - .. WHAT WOULD IT TAKE TO RAISE THE PROGRAM TO ONE OF EXCELLENCE?
- . A COMPETENT SELF-EVALUATION TEAM CAN PROVIDE BETTER IN-DEPTH INSIGHT INTO THE QUALITY OF THE TRAINING PROGRAMS THAN OTHERS WILL BE ABLE TO DO.
- . FURTHER, IF THE SELF-EVALUATION TEAM ACCURATELY ASSESSES THE STRENGTHS AND WEAKNESSES OF THE TRAINING PROGRAMS, IT WILL BE MOSTLY THEIR IDEAS AND RECOMMENDATIONS THAT WILL LEAD THE WAY TO EXCELLENCE--IN CONTRAST TO RECOMMENDATIONS IMPOSED BY OUTSIDERS OR BY TOP MANAGEMENT.
- . THE INPO ACCREDITATION TEAM VISIT WILL PROVIDE AN INDEPENDENT CHECK ON THE THOROUGHNESS OF THE SELF-EVALUATION, AND WILL PROVIDE AN INDEPENDENT COMPARISON OF HOW THE TRAINING PROGRAMS MEET THE INPO CRITERIA AND STACK UP WITH THE STATE OF THE ART.

- . THE INPO EVALUATION TEAM WILL BE COMPOSED OF PEERS FROM OTHER UTILITIES AS WELL AS PROFESSIONAL INPO EVALUATION TEAM MEMBERS. THE TEAM MAY INCLUDE FROM TIME TO TIME AN ACCREDITING BOARD MEMBER OR AN NRC OBSERVER. INCIDENTALLY, SERVING AS AN INPO PEER EVALUATOR CAN BE AN EXCELLENT OPPORTUNITY TO PREPARE FOR ONE'S OWN ACCREDITATION SELF-EVALUATION.
- . I BELIEVE THAT WALT COAKLEY WILL BE DISCUSSING SOME OF THE TRAINING WEAKNESSES IDENTIFIED BY THE INPO ACCREDITATION TEAMS. WITHOUT STEALING HIS THUNDER, THERE ARE SEVERAL OBSERVATIONS I'D LIKE TO MAKE FROM THE PERSPECTIVE OF A BOARD MEMBER:
  - .. I STRONGLY BELIEVE THAT THE PURSUIT AND ATTAINMENT OF EXCELLENCE IN OPERATIONS IS ABSOLUTELY DEPENDENT ON THE QUALITY OF PLANT PERSONNEL AND ON THE QUALITY OF THEIR TRAINING.
  - .. THEREFORE, ACCREDITATION, WHICH I BELIEVE CAN HELP ATTAIN QUALITY IN TRAINING, MAY BE ONE OF THE MOST IMPORTANT PROGRAMS CURRENTLY IN PROGRESS AT INPO.
  - .. I SINCERELY BELIEVE THAT THE ACCREDITATION PROCESS HAS AND IS LEADING TO SIGNIFICANT IMPROVEMENTS IN THE QUALITY OF TRAINING. IT IS A TREMENDOUS UNDERTAKING AND IS COSTLY. HOWEVER, IT IS MY IMPRESSION THAT THOSE INVOLVED AGREE THAT IT IS LEADING TO THE IMPROVEMENT OF QUALITY IN TRAINING PROGRAMS.
  - .. TO BE ACCREDITED, TRAINING PROGRAMS MUST BE SYSTEMATICALLY DESIGNED AND IMPLEMENTED AND MUST BE PERFORMANCE-BASED.
    - MY OBSERVATION: MANY TRAINING PROGRAMS ARE SYSTEMATICALLY DESIGNED, BUT WHEN IT COMES TO SYSTEMATIC IMPLEMENTATION, THE RECORD IS MUCH MORE SPOTTY.
  - .. THIS SYSTEMATIC APPROACH AND PERFORMANCE-BASED TRAINING MUST INCLUDE THE IN-PLANT, ON-THE-JOB PORTION OF THE TRAINING AS WELL AS THE TRAINING CONDUCTED AT THE TRAINING CENTER.
    - MY OBSERVATION: IN-PLANT, ON-THE-JOB TRAINING IS LESS SYSTEMATIC AND LESS PERFORMANCE-BASED.

- .. PERFORMANCE-BASED TRAINING THAT IS SYSTEMATICALLY APPROACHED MUST EXTEND TO INCLUDE MAINTENANCE AND KEY CRAFT PERSONNEL.  
--MY OBSERVATION: THERE IS STILL MUCH TO BE DONE IN THE AREA OF TRAINING PROGRAMS FOR MAINTENANCE AND CRAFT PERSONNEL.
- .. TRAINING AND PLANT OPERATIONS CANNOT BE VIEWED AS COMPLETELY SEPARATE FUNCTIONS. TRAINING CANNOT BE LOOKED AT BY PLANT OPERATIONS PERSONNEL AS SOMEONE ELSE'S RESPONSIBILITY. TRAINING MUST BE THE JOINT RESPONSIBILITY OF BOTH OPERATIONS AND TRAINING PERSONNEL.
- .. TOP-NOTCH OPERATIONS PERSONNEL, INCLUDING LICENSED PERSONNEL, SHOULD BE ENCOURAGED TO ROTATE IN AND OUT OF TRAINING.  
--MY OBSERVATION: SUCH ROTATION IS SOMETIMES DISCOURAGED, NOT CONSIDERED IMPORTANT OR RESULTS IN APPRECIABLE PAY REDUCTION. POLICIES SHOULD BE DEVELOPED TO ENCOURAGE SUCH ROTATION.
- .. THE EVALUATION OF TRAINING PROGRAM EFFECTIVENESS MUST BE ROUTINELY AND SYSTEMATICALLY PERFORMED. THIS EVALUATION CLOSES THE LOOP OF THE TRAINING PROCESS.  
--MY OBSERVATION: MORE ATTENTION MUST BE DIRECTED TOWARDS IMPROVING THIS EVALUATION.
- .. THE SELF-EVALUATION MUST BE DONE THOROUGHLY, CONSCIENTIOUSLY, AND PROFESSIONALLY. THE REPORT SHOULD TELL IT AS IT IS. IF DONE OTHERWISE, ONE ONLY KIDS ONESELF.
- . IF A UTILITY HAS DONE A THOROUGH JOB OF SELF-EVALUATION, THERE SHOULD BE FEW SURPRISES FOLLOWING THE INPO ACCREDITATION TEAM VISIT AND UPON RECEIPT OF THE ACCREDITATION REPORT.
- . FURTHER, IF THE TRAINING PROGRAMS GENERALLY MEET THE INPO CRITERIA, AND IF THE WEAKNESSES AND SHORTCOMINGS HAVE BEEN THOROUGHLY ADDRESSED WITH EFFECTIVE CORRECTIVE ACTIONS, ACCREDITATION BY THE ACCREDITING BOARD SHOULD BE FORTHCOMING.
- . MORE IMPORTANTLY, THE INDUSTRY GOAL OF ATTAINING QUALITY AND EXCELLENCE IN NUCLEAR POWER PLANT OPERATION SHOULD BE MORE READILY ACHIEVED.