

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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PENNSYLVANIA PUBLIC UTILITY :  
COMMISSION, ET AL. :

V. :

PENNSYLVANIA POWER & LIGHT :  
COMPANY :

Docket No. R-00943271,

R-00943271C001

et seq.

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SECRETARY'S OFFICE  
Utility Commission

SURREBUTTAL RESPONSE TO PP&L WITNESS GEORGE T. JONES  
(STATEMENT 15-R)

Mr. Gorge T. Jones', Vice President Nuclear-Engineering, Pennsylvania Power and Light Company (PP&L), rebuttal testimony regarding nuclear power operations, nuclear waste disposal and problems with Thermo Lag and spent fuel storage at the Susquehanna Steam Electric Station (SESS) was general, vague, arbitrary and based on unreliable criteria.

Mr. Jones termed criticisms of Susquehanna's operating record as "grossly unfair and in many cases simply wrong." (Page 2, Lines 17-18.) Mr. Jones arbitrarily selected data to substantiate his claim, specifically the Nuclear Regulatory Commission's (NRC) Systematic Assessment Licensee Performance (SALP) and the plant's operating capacity. Unfortunately, these are flawed indices with which to assess a plant's longevity and operating and safety record.

The SALP process rates licensee performance in four functional areas: Plant Operations, Maintenance, Engineering and Plant Support (radiological controls, security, emergency preparedness, fire protection, chemistry and housekeeping). Mr. Jones' description of the SALP process as a tool used "to determine the level

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of management attention it must devote to a licensee" (Page 3, Lines 7-8.) is disingenuous and misleading. Unless a plant has a major accident (Three Mile Island) or shutdown by NRC decree (Peach Bottom) staffing levels remain relatively steady throughout the industry.

Moreover, the SALP evaluation system is limited and restrictive with the following grading scheme: 1 = above average; 2 = average; 3 = below average. The NRC can also indicate "improving" or "declining" trends. The charge of the NRC is to allow the industry to monitor itself with minimal regulatory interference. Nuclear power operators give more stock to evaluations conducted by the Institute for Nuclear Power Operations (INPO.) For example, an INPO inspection "pointed out some areas for improvement at the plant, and were taking appropriate action." (Shareholders Newsletter," (July 1, 1993.) Unfortunately, this data is proprietary and rarely released to the public.

Even if one accepts the SALP report as an indicator of a plant's performance, this tool has been proven to be unreliable. For example, *prior* to the security breach at Three Mile Island (TMI) on February 7, 1993, the SALP evaluation grade for plant security was a "1." *After* the intrusion, TMI's plant operator, GPU Nuclear (GPUN), received a "1" in Plant Support which includes security. In fact the NRC's Incident Investigations Team's (ITT) concluded: "The ITT reviewed reports for NRC inspections conducted during the last three SALP periods and found no significant indications of precursors. The SALP evaluation process also revealed no significant indications or precursors." ("NRC Reviews," NUREG-1485, Section 4.2.2.) Clearly, the veracity of SALP evaluations is negligible.

Capacity factor is a misleading yardstick frequently utilized by the nuclear industry. Susquehanna's average capacity factor of 78.4% is virtually meaningless as a barometer for plant longevity, safety or economic vitality. For example, at the end of 1991, Yankee Rowe's operating capacity factor was 74.11%. (Nuclear Regulatory Commission.) Yankee Atomic, Yankee Rowe's operator, closed the plant prematurely on February 26, 1992 due to the cost to comply with NRC regulations and the

embrittlement of the reactor vessel. Through November 30, 1992, San Onofre-1's annual capacity factor was 83.66%. (Nuclear Regulatory Commission.) Southern California Edison closed the plant the following month for economic reasons.

Mr. Jones stated, "Most of the violations, particularly in later years of operation, have been Severity Level IV or V, the lowest categories." This is obviously an admission that in the "earlier years" most of the violations were of a more serious nature, i.e. Severity Level I through III. Severity Level IV and V violations are indeed more common throughout the industry; however, they identify problems and weaknesses at a nuclear power plant. In other words, a Level I violation is analogous to a felony while a Level V violation is similar to a misdemeanor.

Neither the SALP or capacity factor rating address generic problems at nuclear power plants. For instance, core shroud cracking, reactor embrittlement, vulnerable containment structures and faulty water level indicators have been identified as generic challenges at Boiling Water Reactors. The process employed by the NRC to investigate these issues is highly suspect. The NRC was harshly criticized by a 19 year veteran of the nuclear industry who was under contract with the Commission. John Darby, a top industry engineer, reviewed Individual Plant Examination (IPE) submittals which are designed to examine and determine the possibility of serious accidents at nuclear power plants. In a memo to the NRC on March 17, 1995, Mr. Darby stated:

Also, I have been told in no uncertain terms to 'don't look so hard and don't ask so much.' The NRC spends more time haggling over the questions to ask and the precise wording of the questions than I spend doing my entire review of the IPE submittal. I am continually re-wording and re-writing questions to meet some undefined goal of what is 'acceptable' to ask the licensee.

Clearly, the NRC is not an aggressive evaluator of design based challenges or site-specific problems that arise at the Susquehanna nuclear power plant or elsewhere.

Internal reporting, Licensee Event Reports (LER), of plant problems has recently increased at the SESS. This measure of a plant's operating performance was omitted from Mr. Jones rebuttal testimony. The number of LER's at Unit-1 in 1991 was 25 and 15 were reported at Unit 2. (Nuclear Regulatory Commission, LER's through December 31, 1991.) By 1992, PP&L reported a decline: 18 LER's at Unit 1 and 14 at Unit 2 (Nuclear Regulatory Commission, LER's through December 31, 1992.) The following year another decrease was noted: 11 LER's at Unit 1 and 10 at Unit 2. (Nuclear Regulatory Commission, LER's through December 31, 1993.) However, in 1994 the number of Licensee Event Reports increased by 30 % to 19 at Unit 1 and 9 at Unit 2, precisely at a time where Mr. Jones boasted of a decline in the severity level of NRC violations. (Nuclear Regulatory Commission, LER's through December 31, 1994.)

The number and frequency of problems at the SESS has remained consistent. PP&L has simply chosen to be more forthright in reporting incidents to the NRC as a means of mitigating and deflecting harsher severity levels in Notice of Violations (NOV.)

Mr. Jones also did not disclose that PP&L tested Thermo Lag in 1981 *prior* to its installation at Susquehanna. Under standard testing criteria, Thermo Lag failed the tests. This problem was not discovered by the NRC's Office of Inspector General until 1992 and was not made public until April 1995 when a response to a Freedom of Information Act request was published. The NRC did not cite PP&L for the Thermo Lag violation and refused to issue fines for other fire protection violations. Susquehanna continues to use the faulty fire retardant and Rubin Feldman, president of Thermal Sciences Inc., the manufacturer of Thermo Lag is scheduled to go on trial this month on seven criminal counts relating to falsifying Thermo Lag testing records.

Mr. Jones asserted: "Finally the company has dealt thoroughly with the concerns raised about the adequacy of spent fuel pool cooling. Both PP&L and the NRC have concluded that this issue does not raise any significant safety concerns." (Page 4, Lines 12-14.) Mr. Jones failed to note that those concerns were initially raised

by Donald Prevatte and David Lochbaum, formerly consulting engineers at Susquehanna. Conrad McCracken, chief of the NRC's plant systems branch identified it as an issue that needs to be "addressed" and the NRC sent a notice to all Boiling Water Reactor owners concerning this problem. PP&L changed procedures, trained personnel and replaced some equipment in response to these concerns. The two engineers made a formal presentation to the NRC on October 1, 1993. Mr. Jones neglected to mention the Commonwealth of Massachusetts found similar spent fuel cooling problems at the Pilgrim nuclear power plant and Washington Nuclear Power Reactor Number 2 (Hanford) also identified a similar problem.

Mr. Jones flippantly dismissed the radioactive waste problem at SESS: "Likewise, disposal of radwaste is being addressed on a statewide basis and national level. The wastes being generated today at the plant are being handled on site, in full compliance with NRC all regulations, and present no threat to the health and safety of the public." (Page 4, Lines 8-12.) And in response to Data Request to the Office of Consumer Advocate Mr. Jones stated PP&L contributed funding to "statewide screening, licensing activities, technical studies and public outreach necessary for the siting of the facility." However, Mr. Jones failed to provide information relating to the current problems of siting a low-level radioactive waste facility in Pennsylvania. According to the "Appalachian Compact Users of Radioactive Isotopes" (ACURI) newsletter, of which PP&L is represented on the Board of Directors (Roger A. Stigers, H.P.), project delays and cost overruns prompted the Pennsylvania General Assembly to pass a "resolution directing the Legislative Budget and Finance Committee to conduct an immediate audit of payments by the state's Department of Environmental Resources to its contractor, Chem-Nuclear Systems Inc., for activities related to development of a low-level radioactive waste (LLRW) disposal facility." (March 1995, p.6.) The project will require an additional financial infusion of \$26 to \$90 million. This development further delays siting, screening, technical studies and "public outreach" of a LLRW site. Therefore, the SESS will serve as a *de facto* low-level radioactive waste site even though the facility was not licensed, constructed or designed to house radioactive waste indefinitely.

Mary Wells of GPU Nuclear recently admitted in an interview with the Lancaster New Era, (Thursday, May 4, 1995, A-8), the nuclear industry is double-billing its customers for high-level radioactive waste storage. PP&L also bills its customers twice: 1) Maintaining on-site, spent fuel pools, and 2) Contributions to the Nuclear Waste Trust Fund.

Finally, Mr. Jones failed to mention PP&L's plan to move from spent fuel cooling to dry-cask storage is highly problematic and experimental. Mr. Jones admitted in his response to a Data Request (March 21, 1995) that spent fuel storage capacity is sufficient through 1997. However, PP&L's reliance on dry-cask storage is disturbing in light of the technical problems and legal delays experienced at the Palisades, Prairie Island and Oyster Creek nuclear power plants.

Respectfully submitted,



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DATE: May 13, 1995

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**CERTIFICATION OF SERVICE**

I hereby certify that I have this day served a true and correct copy of the foregoing document upon the individuals named below by US mail or hand delivery in accordance with the requirements of Section 1.54.

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DATE: May 13, 1995