

# SIGNED DECLARATION

~~Security-related information— withheld under 10 C.F.R. 2.390—~~  
Exhibit FP No. 7

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## UNITED STATES NUCLEAR REGULATORY COMMISSION

*In the matter of*

ENERGY NUCLEAR INDIAN POINT 2 L.L.C.)	
,ENERGY NUCLEAR )	License No. DPR 26 and
INDIAN POINT 3, L.L.C., )	License No. DPR 64
And Entergy Nuclear Operations, Inc. )	
and Entergy Northeast, Inc., )	Docket No. 50-247 and
regarding the Indian Point Energy Center )	Docket No. 50-286
Unit 2 and Unit 3 )	
License Amendment Regarding Fire Protection Program	

**FIRST DECLARATION OF ULRICH WITTE**  
**PETITION FOR LEAVE TO INTERVENE, REQUEST FOR HEARING, AND**  
**CONTENTIONS REGARDING FIRE PROTECTION PROGRAM AT**  
**INDIAN POINT UNIT 3 AND UNIT 2**

My name is Ulrich Witte. WestCAN, RCCA. PHASE, SIERRA CLUB, BEYOND NUCLEAR and New York State Assemblyman Richard Brodsky, have retained me under the auspices of the Indian Point Safe Energy Coalition as a consultant with respect to the above-captioned proceeding. I am a mechanical engineer with over twenty-six year's professional experience in engineering, licensing, and regulatory compliance of fire protection of nuclear commercial nuclear facilities. I have considerable experience and expertise in the areas of configuration management, engineering design change controls, and licensing

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basis reconstitution. I have authored or contributed to two EPRI documents in the areas of finite element analysis, and engineering design control optimization programs. I have led industry guidelines endorsed by the American National Standards Institute regarding configuration management programs for domestic nuclear power plants. My 26 years of experience has generally focused on assisting nuclear plant owners in reestablishing fidelity of the licensing and design bases with the current plant design configuration, and with actual plant operations. In short, my expertise is in assisting problematic plants where the regulator found reason to require the owner to reestablish competence in safely operating the facility in accordance with regulatory requirements. My curriculum vitae is attached hereto as Attachment A.

I submit the following comments in support of each coalition stakeholder in asserting the unlawful and frankly dangerous exemption to fire protection federal rules that was granted by the Nuclear Regulatory Commission and published on October 4<sup>th</sup>, 2007 in the federal register

**I. The exemption granted by the commission allows the licensee to take manual action in suppressing a fire that is outside the limitations of the rule.**

In fact the exemption granted requires that in order for the reactor to maintain controlled criticality during and after a fire in either one of two electrical tunnels, the fire would have to be manually extinguished within 24 minutes. This

time limit starts from first detecting the fire, then summoning the brigade, responding, and amongst various actions de-energizing the 480 volt e bus, and then fully suppressing the burning cable insulation in order to protect electrical cables from ground faults. In addition, these actions must in less than 24 minutes prevent shorting power cables from spuriously initiating other circuits to prevent inadvertently open or close valves inside containment.

These actions involve a brigade donning nomex gear, donning scott air packs, organizing a team that in accordance with the IP3 Technical Requirements Manual Exhibit FP No. 15 which will have only limited trained reactor operator assistance, entering an electrical tunnel, and then suppressing the fire knowing full well that energized circuits must be maintained for one train, while the burning trays containing the redundant cable only one foot away are de-energized and the fire suppressed prior to damaging cables. The brigades confidence in spraying water onto the electrical fire will further slow an already unrealistic response of a sprint to suppress the fire making full extinguishment in less than 24 minutes entirely unrealistic.

Where this an “ordinary” electrical fire involving high voltage or medium voltage combined with high amperage equipment, without threat to safe operation of the reactor core, the suppression scenario without the unfathomable time constraint may be plausible, but accomplished with deliberate actions that

minimize risk to fire brigade members. But not in 24 minutes from ignition. See for example, NUREG-1852, “Demonstrating The Feasibility And Reliability Of Operator Manual Actions In Response To Fire,” October 2007.

As to the aforementioned analysis, and as delineated in greater detail in subsequent sections, determining whether there is enough time available to perform the operator manual action should account for potential circumstances, such as (1) the potential need to recover from or respond to unexpected difficulties associated with instruments or other equipment, or communication devices, (2) environmental and other effects that are not easily replicated in a demonstration, such as radiation, smoke, toxic gas effects, and increased noise levels, (3) limitations of the demonstration to account for all possible fire locations that may lead to the need for such operator manual actions, (4) inability to show or duplicate the operator manual actions during a demonstration because of safety considerations while at power, and (5) individual operator performance factors, such as physical size and strength, cognitive differences, and the effects of stress and time pressure. The time available should not be so restrictive relative to the time needed to perform the actions that personnel are not able to recover from any initial slips or errors in conducting the actions (i.e., there is some “recovery” time built in, should it be needed).

Exhibit FR No. 16.

II. The exemption granted by the commission rely on their belief of a low probability of the occurrence of the event, which is outside the parameters for Appendix R Rule.

3. When enquiring as to how the Commission was able to grant this exemption with members of the NRC staff, the response was that the industry was moving away from deterministic approaches for managing fire threats to reactor core to a probabilistic analysis. I was told that even though the event would have severe consequences of this fire, the probability of it occurring was low enough by the

licensees analysis, that the exemption was justified.

With this kind of rationale, why bother to protect redundant cables at all? Essentially, by this approach no protection could be found acceptable for the tunnel, with no manual suppression, with no detection, and no actual preparedness in the event of a fire.

In 1986 I was responsible for fully implementing the requirements of 10CFR50.48 and Appendix R to the Ranch Seco Nuclear Power Station owned by the Sacramento Municipal Utilities District.

As the Project Engineer, I was responsible for establishing compliance to Appendix R for the plant. This was a monumental effort, given that the licensee had delayed implementation, and in approximately one year, the physical changes to the facility had to be designed, implemented, and where possible tested to meet sections III G of appendix R. Numerous procedures had to be developed from scratch, and operators required extensive training on successful safe shutdown of the facility with a fire initiated from any area of the plant that threatened safe shut down equipment. It was beyond comprehensible to think that any competent and reasonable operator would and should be required to take manual actions so desperately necessary that if not accomplished in 24 minutes with full suppression, the fire could have led to core melt. Plant management, the NRC Inspection Team, and NRR a like would each have declared a program crediting actions such as

those as highly unrealistic, and would have never accepted them as successfully implementing Appendix R for the plant. An exemption request for this was unthinkable.

It was ludicrous then, and it is ludicrous now. Of note is that this project was inspected by the NRC and was found as having zero open items regarding implementation of Appendix R.

**III. Use of alternative analysis under NFPA 805 as an escape from the deterministic rules enacted in 1979 and contains assumptions that counter recent codified law relevant to fire and Design Basis Threats.**

Use of NFPA 805 is being pushed by industry and the regulator alike. When the regulator acknowledged in 2002 the substantial non-compliance of numerous licensee holders to the requirements of Appendix R, in particular not crediting manual actions to maintain safety system and safe shutdown capability for one hour in certain areas, the alternative approach was invoked. The alternative approach fails to include the revised baseline assumptions required in 10CFR73.1 which includes fire induced events by personnel inside the facility having both knowledge of and target awareness of the consequences of the fire. The exemption granted requires an amended Safety Evaluation by the Staff, and as a result constitutes an unacceptable change to the operating license DPR No. 64 to the Indian Point Unit 3 Facility.

I declare under the penalty of perjury that the foregoing is true and correct.

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Executed this 3<sup>rd</sup> day of December, 2007.

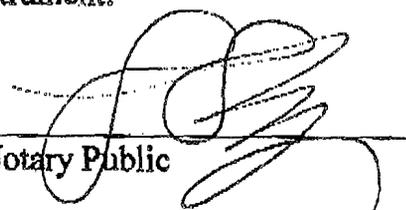


Ulrich K. Witte

State of New York            )  
  )ss.:  
County of Rockland         )

On the 3<sup>rd</sup> day of December, in the year 2007 before me, the undersigned, personally appeared Ulrich Witte, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her their signatures(s) on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.

SUSAN HILLARY SHAPIRO  
Notary Public - State of New York  
No. 02SH6060466  
Qualified in Rockland County  
My Commission Expires June 25, 20 11

  
Notary Public