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September 28, 2007

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USNRC

October 4, 2007 (11:25am)

Office of the Secretary
U.S. Nuclear Regulatory Commission,
Washington, D.C. 20555-0001
Attention: Rulemaking and Adjudications Staff

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

RE: In the matter of ENTERGY NUCLEAR INDIAN POINT 2, L.L.C. and ENTERGY NUCLEAR OPERATIONS, INC, Indian point License Renewal Application No. DPR-26, Docket No. 50-247

Dear Sir or Madam:

Please find enclosed for filing in the above stated matter, Friends United for Sustainable Energy USA Inc.'s corrected petition for Leave to Intervene, Request and Contentions; and Notice of Appearance by Attorney Susan H. Shapiro, and finally notice of appearance declarations and exhibits.

Additionally enclosed is a CD ROM digital copy for inclusion into the hearing docket files as well as ADAMS. The original is enclosed together with two copies for your office. In addition a copy is was sent directly to Mr, Larry Burns, Esq., Chief Counsel to the Commission. As he suggested in our meeting with him last Friday, rather than leaving the original and your two copies at the security desk, you would be best served if we over-night the original and two copies to you directly. Given my travel plans over the weekend, I was only able to transmit these to you today.

Thank you for your attention in this matter.

Sincerely,



Susan Shapiro, Esq.

Enclosures:

cc: Certificate of Service.

TEMPLATE = SECY-037

SECY-02

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the matter of
ENTERGY NUCLEAR INDIAN POINT 2, LLC)
And ENTERGY NUCLEAR OPERATIONS, INC.) NO. 50-247
Indian Point Energy Center Unit 2)

NOTICE OF APPEARANCE

Through Attorney, Susan H. Shapiro, and pursuant of 10 CFR. § 2.314(b) gives notices of her appearance on behalf of Friends United for Sustainable Energy USA, Inc. The undersigned is a member of good standing of the bar of one or more Courts of the United States, and have been duly retained by Friends United for Sustainable Energy to represent it in this matter. Friends United for Sustainable Energy's address is 21 Perlman Drive, Spring Valley, NY 10977. It's email address is fuseusa@yahoo.com.

By:


Susan H. Shapiro
Attorney for Friends United for
Sustainable Energy USA, Inc.
21 Perlman Drive
Spring Valley, NY 10977
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CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of September, 2007, a copy of Friends United for Sustainable Energy USA, Inc.'s Petition for Leave to Intervene, Request for Hearing, and Contention regarding the matter of Entergy Indian Point 2, LLC and Entergy Nuclear Operations, Inc, Indian Point 2 LLC License Renewal Application, Docket No. 50--247, License No. DPR-26 ; and the Notice of Appearance for Friends United for Sustainable Energy USA, Inc. by Attorney Susan H. Shapiro, were sent by First Class U.S. Mail, postage prepaid to:

Office of the Secretary of Commission Congresswoman Nita Lowey
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Att: Rulemaking and Adjudications Staff
(also by e-mail)

Office of the General Counsel Congressman Maurice Hinchey
U.S. Nuclear Regulatory Commission
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**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

In the matter of

ENTERGY NUCLEAR INDIAN POINT 2, L.L.C)	License No. DPR 26
And Entergy Nuclear Operations, Inc.)	
Indian Point Energy Center Unit 2)	Docket No. 50-247
License Renewal Application)	

**PETITION FOR LEAVE TO INTERVENE, REQUEST FOR
HEARING, AND CONTENTIONS**

Friends United for Sustainable Energy, USA, Inc. (referred to hereinafter as FUSE, Stakeholders, Intervenors, or Petitioners), pursuant to 10 CFR § 2.309 (d) and (e), petition to intervene in the proceeding in response to the August 1, 2007 Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Number DPR-26 for an Additional 20-Year Period (72 FR 42134, August 1, 2007) concerning the Indian Point Energy Center License Renewal application of Entergy Nuclear Indian Point 2, LLC (referred to hereinafter as IP2 LLC) and Entergy Nuclear Operations, Inc. (referred to hereafter as Entergy Nuclear Operations) and (collectively referred to as the Applicant, or Licensee, or Entergy) to renew its operating license Nos. DPR-26 for Indian Point Energy Center Unit 2 (“IP2”), for

twenty years beyond the current expiration date of September 28, 2013.

FUSE also requests a hearing under 10 C.F.R. §2.309(a).

I. PARTICIPATION AS A MATTER OF RIGHT

A. FUSE has standing

The standing requirement for Nuclear Regulatory Commission (NRC) adjudicatory proceedings derives from the Atomic Energy Act (AEA), which interest may be affected by the proceeding. 42 U.S.C. 2239(a)(1)(A). FUSE has standing on its own behalf and on behalf of its members. FUSE is a not-for-profit, New York State Corporation. FUSE is a nonpartisan sustainable energy policy think tank, whose purpose is to protect public health and safety. FUSE has members who live within the State of New York, New Jersey and Connecticut and who make their residences, places of occupation and recreation within fifty (50) miles of Indian Point. FUSE's address of incorporation is 34 Scenic Drive, Suffern, NY 10901, which is within nine miles of Indian Point and situated within the Plume Exposure Pathway (EPZ), also referred to as the "Peak Fatality Zone." The central office of FUSE is located at 21 Perlman Drive, Spring Valley NY, 10977, which is located within 11 miles of Indian Point and within the Indian Point "Ingestions Pathway" EPZ, , also referred to as the "Peak Injury" Zone.

FUSE also has numerous members that reside in the Indian Point immediate vicinity and throughout New York, New Jersey and Connecticut, whose concrete and particularized interests will be directly affected by this proceeding.

B. FUSE has standing on its own behalf

As stated in Ms. Susan H. Shapiro, Esq.'s attached declaration, Exhibit A, FUSE's headquarters are 21 Perlman Drive, Spring Valley, New York. Fuse's offices are within 11 miles of the Indian Point Entergy Center Unit 2 and within the "Ingestion Pathway EPZ," known as the "Peak Fatality Zone." FUSE's offices house the organization's records and material archives dating back six years. They also house an extensive technical book collection and FUSE furnishings and equipment. FUSE's offices also provide an operation center for the organization.

FUSE is reasonably concerned that the proposed Indian Point 2, LLC license could increase both the risk and the harmful consequences of an offsite radiological release. Furthermore, FUSE is concerned that the radiological contamination resulting from such a release would impact the value of its property, and interfere with the organizations rightful ability to conduct operations in an uninterrupted and undisturbed manner. *Id.* Certainly, any evacuation would severely disrupt and damage FUSE operations. *Id.* FUSE

therefore qualifies for intervention pursuant to 10 C.F.R. § 2.309(d).

FUSE also qualifies for discretionary intervention. 10 CFR § 2.309(e). FUSE's participation may reasonably be expected to assist in developing a sound record. It is well versed in the field of nuclear energy and safety. FUSE's constituency represents members who have participated in numerous Nuclear Regulatory Commission proceedings and public meetings. The nature of FUSE's interests is not only its members' (and its own) property interests but the public interest. In particular FUSE is a lead member of the Indian Point Safe Energy Coalition (IPSEC), a broad coalition of 70 other free standing organizations. The Stakeholders representing this filing also represent the 20 million resident Stakeholders within 50 miles of Indian Point.

FUSE can provide local insight that cannot be provided by the Applicant or other procedural parties. FUSE's members are Indian Point 2 neighbors. In addition, as established in this proceeding, this proceeding may have significant affect on FUSE and its members. Its members are Indian Point 2's neighbors. FUSE therefore qualifies for discretionary intervention. 10 C.F.R. § 2.309(e).

FUSE is entitled to a full adjudicatory hearing with all the rights of discovery and cross-examination provided by 10 CFR Subpart G, because FUSE has standing, and in the Petition herein to Intervene and Formal

Request for Hearing, FUSE raises substantial issues of fact and law that meet the requirements of 10 CFR §2.310 (d).¹

C. FUSE has Representational Standing

Declarations of Mr. Sherwood Martinelli contained in Exhibit B; Ms. Julie Gottesman contained in Exhibit C; and Mr. Gary Shaw, contained in Exhibit D demonstrate that FUSE members reside within the immediate vicinity of Indian Point. FUSE's members live less than fifty miles, and many less than ten miles from Indian Point 2, and are within its Emergency Planning Zone, and subject to radiological contamination, evacuation, loss of property, or other harms in the event of any mishap at the plant. *Id.* Members also use and enjoy the segment of the Hudson River adjacent to the Indian Point 2 on professional and personal bases. Declarations of Mr. Andrew Y. Stewart, Exhibit E, Mr. Timothy Englert, Exhibit F, and Ms. Jeanne Shaw, Exhibit G. The Hudson River is the receiving water body for any continued thermal discharge. *Id.* Declaration of Mr. Robert Jones, Exhibit H.

FUSE, an organizational and professional Intervenor, believes that its members' interests will not be adequately represented without this action to intervene, and without the opportunity to participate as full parties in this

¹ Although FUSE meets the requirements of 10 CFR §2.310(d) for a full adjudicatory hearing on all contentions it raises, FUSE does not concede the procedures of 10 CFR §2.310 which restrict use of full adjudicatory hearing procedures are lawful and reserves the right to challenge, in an appropriate legal forum, these procedures, as applied to FUSE in this case, should that be necessary to permit FUSE to fully adjudicate the important nuclear safety and environmental issues it raises.

proceeding. If the new superseding license for Indian Point (IP2) is granted without first resolving the Petitioner's safety concerns, this nuclear power installation may operate unsafely and pose an unacceptable risk to the environment and to the health, safety, and welfare of FUSE's members and the Stakeholders who live, recreate, and conduct business within its vicinity.

An organization has standing to sue on behalf of its members when a member would have standing to sue in his or her own right, the interests at issue are germane to the organization's purpose, and participation of the individual is not necessary to the claim or requested relief. *Hunt v. Washington State Apple Advertising Commission*, 432 U.S. 333, 343 (1977). As the Commission has applied this standard, an individual demonstrates an interest in a reactor licensing proceeding sufficient to establish standing by showing that his or her residence is within the geographical-area that might be affected by an accidental release of fission products. This "proximity approach" presumes that the elements of standing are satisfied if an individual lives within the zone of possible harm from the source of potential fission product release.

As is demonstrated by the above discussion and attached declarations, the members represented by FUSE all have standing in their own right. The issues of public health and safety are germane to FUSE's purposes. Also, the

individual participation of the members is not necessary to the claims or requested relief. Proximity [to a facility] has always been deemed to be enough to establish the requisite interest to confer standing. The Commission's "rule of thumb" in reactor licensing proceedings is that "persons who reside or frequent the area within a 50-mile radius of the facility" are presumed to have standing. *Sequoyah Fuels Corp.*, 40 NRC 64, 75 n.22 (1994); See also, *Duke Energy Corp.*, 48 NRC 381,385 n.1 (1998).

D. FUSE Meets Prudential Standing Requirements

In addition, Courts have created a prudential standing requirement that if a petitioner's interests fall within the "zone of interests" protected by the statute on which the claim is based. *Bennett v. Spear*, 520 U.S. 154, 162(1997). The Atomic Energy Act and NEPA, the statutes at issue here, protect the same interests of protecting public health and safety, that are held by FUSE's members, and furthered by FUSE's purpose.

II. FUSE DOES NOT WAIVE ITS RIGHTS TO SUBMIT SUPPLEMENTAL CONTENTIONS AND AMEND THE CONTENTIONS SET FORTH HEREIN, AND TO OTHER PROCEDURAL MATTERS

A. Right to supplement and amend contentions is not waived.

Regardless of the procedural violations of the Federal Administrative Procedures Act by the Applicant in submitting the License Renewal Application (LRA) and by the Nuclear Regulatory Commission in not

rejecting the LRA, FUSE is submitting a statement of the contentions that reflect the concerns of the Stakeholder community and should be accepted for hearing by the Nuclear Regulatory Commission on behalf of FUSE's members and broad constituency. The contentions submitted herein should not be deemed to waive FUSE's right to submit further contentions in the future or amend the contentions set forth herein. Further, FUSE reserves its right to submit additional contentions, and amend the contentions set forth herein.

B. Efficiency of Cross Examination of Expert or Fact Witnesses

The most efficient manner by which statutory rights can be exercised is to allow both depositions and live testimony to the extent the issues are not fully developed during discovery. Although not specifically mentioned in 10 CFR §2.102, cross-examination of witnesses will be more efficient when possible for FUSE and the Applicant to submit cross-examination outlines five days before the hearing, to alert each witness to the subjects which the parties will explore.

FUSE has the right to seek production of documents, if for no other reason than production of documents will facilitate interrogation of witnesses and narrow the scope of their examination. Otherwise, witnesses will be asked questions about issues which are addressed in documents which either are not

present during the interrogation or the analysis of which will require a hiatus in the interrogation.

Relevant documents and cross-examination outlines are hereby requested to be submitted by all parties wherever possible, at least five days in advance such that the witness may be prepared to fully answer the questions posed.

C. FUSE contends that the Nuclear Regulatory Commission and Applicant have had and will continue to have ex parte communications in violation of the requirements of Title 5, Part 1 Chapter 5 subchapter 11 § 557. Ex parte communication by the parties shall adhere in the strictest sense to the requirements of Title 5, Part I Chapter 5 subchapter II, §557.

The Stakeholders request that the NRC follows the regulations with regard to ex parte communications with the Applicant as required by Title 5, Part 1, Chapter 5 subchapter II§557. The sections that have particular relevance are provided below. In any agency proceeding which is subject to subsection (a) of this section, except to the extent required for the disposition of ex parte matters as authorized by law:

(i) No interested person outside the agency shall make or knowingly cause to be made to any member of the body comprising the agency, administrative law judge, or other employee who is or may reasonably be

expected to be involved in the decisional process of the proceeding, an ex parte communication relevant to the merits of the proceeding;

(ii) No member of the body comprising the agency, administrative law judge, or other employee who is or may reasonably be expected to be involved in the decisional process of the proceeding, shall make or knowingly cause to be made to any interested person outside the agency an ex parte communication relevant to the merits of the proceeding;

(iii) A member of the body comprising the agency, administrative law judge, or other employee who is or may reasonably be expected to be involved in the decisional process of such proceeding who receives, or who makes or knowingly causes to be made, a communication prohibited by this subsection shall place on the public record of the proceeding:

(A) All such written communications;

(B) Memoranda stating the substance of all such oral communications; and

(C) All written responses, and memoranda stating the substance of all oral responses, to the materials described in clauses (i) and (ii) of this subparagraph

(iv) Upon receipt of a communication knowingly made or knowingly caused to be made by a party in violation of this subsection, the agency, administrative law judge, or other employee presiding at the hearing may, to the extent consistent with the interests of justice and the policy of the

underlying statutes, require the party to show cause why his/her claim or interest in the proceeding should not be dismissed, denied, disregarded, or otherwise adversely affected on account of such violation; and

(v) The prohibitions of this subsection shall apply beginning at such time as the agency may designate, but in no case shall they begin to apply later than the time at which a proceeding is noticed for hearing unless the person responsible for the communication has knowledge that it will be noticed, in which case the prohibitions shall apply beginning at the time of his acquisition of such knowledge.

(vi) Therefore the Nuclear Regulatory Commission must abide by these regulations throughout the License Renewal Application proceedings and cease having ex parte communications with the Applicant, with regard to the License Renewal Application.

III. FUSE SUBMITS TWENTY-SIX ADMISSIBLE CONTENTIONS

A. Applicable Legal Standards to Specific Contentions

Proposed contentions must satisfy six requirements of 10 C.F.R. § 2.309(f)(1). This rule is intended to ensure that the “full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.” *Duke Energy Corporation (Oconee Nuclear Station, Units 1, 2 and 3)*, 49 N.R.C. 328, 334 (1999)

emphasis added. Sections (1) through (6) below summarize the requirements of § 2.309(f)(1).

1. Specifically State the Issue of Law or Fact to be Raised

Section 2.309(f)(i) requires a specific statement of issue of law or fact to be raised or controverted.

2. Briefly explain the Basis for the Contention

Section 2.309(f)(ii) requires a brief explanation of the contention.

3. Contentions must be within the scope of the Proceeding

Section 2.309(f)(iii) requires a petitioner to demonstrate that the issue raised in the contention is within the scope of the proceeding.

4. Contentions Must Raise a Material Issue

Section 2.309(f)(iv) requires “that the issue raised in the contention is material to the findings the Nuclear Regulatory Commission must make to support the action that is involved in the proceeding.” Section 2.309(f)(iii) requires the petitioner to “demonstrate that the issue raised in the contention is within the scope of the proceeding.”

(i) Scope of Environmental Review

The scope of the Nuclear Regulatory Commission’s environmental review in the context of a license renewal proceeding is defined by 10 CFR Part 51 and by NRC’s “Generic Environmental Impact Statement for License

Renewal of Nuclear Plants” (NUREG-1437 (May 1996). Some environmental issues are resolved generically for all plants, and such issues – classified in 10 C.F.R. Part 51, Subpart A, Appendix B as “Category 1” issues – are normally beyond the scope of a license renewal hearing. In the Matter of *Florida Power & Light Company (Turkey Point Nuclear Generating Plant, Units 3 and 4)*, 54 NRC 3,15; 10 CFR § 51.53(c)(3)(i). The remaining issues in Appendix B, which are designated as “Category 2” issues, are issues for which (1) the applicant must make a plant-specific analysis of environmental impacts in its Environmental Report, 10 CFR § 51.53(c)(3)(ii), and (2) the NRC Staff must prepare a supplemental Environmental Impact Statement, 10 CFR § 51.95(c). Contentions concerning Category 2 issues are within the scope of license renewal proceedings. *Turkey Point Nuclear Generating Plant, Units 3 and 4*, 54 NRC at 11-13.

(ii) Scope of Safety/ Aging Management Review

10 CFR 54.4 sets forth the scope of review concerning safety issues in a license renewal proceeding. The safety review “is confined to matters relevant to the extended period of operations requested by the applicant,” and focuses on the plant systems, structures, and components “that will require an aging management review for the period of extended operation,” or “are subject to an evaluation of time-limited aging analyses.” *Duke Energy Corp. (McGuire*

Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1, 2 and 3),
56 NRC 358, 363-64 (2002).

The NRC has emphasized that the level of inspection and testing related to age-management over the extended license term is one of the core issues addressed by the license renewal proceeding:

Part 54 centers the license renewal reviews on the most significant overall safety concern posed by extended reactor operation – the detrimental effects of aging. By its very nature, the aging of materials ‘becomes important principally during the period of extended operation beyond the initial 40-year license term,’ ... Adverse aging effects can result from metal fatigue, erosion, corrosion . . . and shrinkage. Such age-related degradation can affect a number of reactor and auxiliary systems . . . Indeed, a host of individual components and structures are at issue. See 10 CFR 54.21(a)(1)(i). Left unmitigated, the effects of aging can overstress equipment, unacceptably reduce safety margins, and lead to the loss of required plant functions, including the capability to otherwise prevent or mitigate the consequences of accidents with a potential for offsite exposures.

Accordingly, Part 54 requires renewal applicants to demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation. Applicants must identify any additional actions, i.e. maintenance, replacement of parts, etc., that will need to be taken to manage adequately the detrimental effects of aging. Adverse aging affects are generally gradual and thus can be detected by programs that

ensure sufficient inspections and testing. *Turkey Point Nuclear Generating Plant, Units 3 and 4*, 54 N.R.C. 3, 7-8 (2001)(internal citations omitted).

5. Contentions Must be Supported by Facts or Expert Opinions

Section 2.309(f)(v) requires “a concise statement of the alleged facts or expert opinion which support the Petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue.” An Intervener is not required to prove its case at the contention filing stage: “the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality as that is necessary to withstand a summary disposition motion.” Statement of Policy on Conduct of Adjudicatory Proceedings, 48 N.R.C. 18, 22 n.1 (1998), *citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process*, Final Rule, 10CFR54, F.R. 33168, 33171 (Aug. 11, 1989). Rather, petitioner must make “a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate.” *In Gulf States Utilities Co.*, 40 NRC43, 51 (1994), *citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process*, Final Rule, 10 CFR, 54 F.R. 33168, 33171 (Aug. 11, 1989).

6. Contentions Must Raise A Genuine Dispute Of Material Law Or Fact

Section 2.309(f)(vi) requires that petitioner:

Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioners belief.

All that is needed is “a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate.” *In Gulf States Utilities Co.*, 40 NRC 43, 51 (1994), *citing*, *Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process*, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989).

B. FUSE asserts that the Applicant and the federal regulator made procedural violations of the Administrative Procedures Act, Subchapter II—Administrative Procedures. This resulted in substantive violations of the license renewal application submitted by the Applicant and accepted by the federal regulator.

The Applicant violated federal rule 10 CFR §54.4 when it submitted a single incomplete, inadequate and incorrect License Renewal Application that was in violation of specific regulatory requirements 10 CFR §54.4, which substantially affected three distinctly different nuclear facilities. Under 10CFR§54.17(d) “filing of application” an Applicant for a renewed license may submit an application for other kinds of licenses.”

Therefore Indian Point 2 LLC and Entergy Nuclear Operations cannot file one application for the same license, nor can one application for three separate companies be filed for two separate licenses.

This rule does not mean, however, that multiple Applicants or licensees can file for a single license.

Each facility affected by this LRA is docketed individually, has distinct DPR numbers, was constructed by different Architect/Engineers under different General Design Criteria, and has different owners for most of each facility's operating history.

Responsive to the Administrative Procedures Act, the charter of the Atomic Energy Licensing Board as published in the Federal Register 37 FR 28,710 (1972) and the Commissioners regulations contained in 10CFR 2.104, 2.300, 2.303, 3.311, 2.318, and 2.132 may be interpreted to include contested issues in NRC licensing adjudications falling into two generic categories: (1) safety/technical issues arising under the Atomic Energy Act; and (2) environmental issues arising under the National Environmental Policy Act (NEPA). To renew the facility's operating license for an additional 20 years beyond its original 40-year license, the underlying application ***must include detailed analyses of the potential safety issues and environmental impacts posed by operating the plant for an additional 20 years.*** Members of the

public, state and local governments, and citizen organizations opposing the application can petition to intervene to contest the adequacy of the application's safety and/or environmental analyses.

The process for license renewal is sufficiently procedurally complex, and technically detailed to support regulatory rules for one LRA for each facility. The NRC technical staff (an agency entity entirely separate from the Atomic Safety License Board) conducts a thorough review and analysis of the technical and safety aspects of the application, and subsequently issues a Safety Evaluation Report that describes the staff's review and related findings. The staff also conducts a similar review on the environmental side, which typically results in the preparation of a full Environmental Impact Statement (EIS). Because major licensing actions generally require an EIS, Licensing Board cases regarding such activities usually have a significant National Environmental Protection Act component in addition to safety issues. In addition, Intervener Petitions and Requests for Hearings must be reviewed and adjudicated. Therefore by the Applicant co-mingling LRA's for two unique plants, LLCs and licenses, the Applicant further complicates the proceedings, thereby reducing the NRC's ability to conduct comprehensive, focused oversight for each individual facility.

Indian Point Unit 1 (Unit 1) is not even cited under the application, however it is substantially affected and affects the operations of Unit 2, in spite of it having been shut down for 33 years. This violation creates an avalanche of mixing of safety, technical and environmental issues caused by co-mingling, which introduce substantial additional complexity in the renewal proceedings. By failing to include Indian Point 1 components and systems in the LRA, the Applicant defeats the Stakeholders rights of Intervention and Hearings, promulgated under the Federal Administrative Procedures Act, with regard to the Indian Point 1 components and systems.

This egregious action alone by Entergy forestalls the publics' rights promulgated under the federal Administrative Procedures Act to adjudicate the proper decommissioning and remediation of the Unit1 site.

Therefore the NRC must deny the Applicant's LRA as being incomplete, inaccurate, incorrect and inadequately submitted.

IV. CONTENTIONS

- A. Contentions 1 through 5: The Applicant violated the Administrative Procedures Act in bypassing the Code of Federal Regulations (CFR) and instead used trade guidance for Indian Point 2 instead of General Design Criteria for current design, and the current operating license with regard to the Applicant's LRA for an additional 20 years of operation.

Issue Statement: The regulatory rules for obtaining a new superseding license, as delineated in the code of federal regulations, specifically rules under 10 CFR 54, “License Renewal” and in particular, aging management as delineated under 10CFR54.21, were set aside by Applicant in lieu of suggested criteria promulgated by the trade industry. The Applicant misrepresented the specific General Design Criteria which formed the basis of the Safety Evaluation Report granting the Unit 2 operating license, and subsequently remained in violation of the terms of its operating license and with federal rules for four decades, and never corrected the obvious error—placing economics ahead of the health and safety of the public.

The Applicant, as well as the federal agency, willfully and knowingly violated the Administrative Procedures Act, and as a result now has prostituted the license renewal application submittal, contents, acceptance and approval for Indian Point Unit 2. The Aging Management Programs proposed by the Applicant are based upon misrepresentations of the actual general design criteria to which Indian Point 2 was licensed. The as-built construction of the facility does not comply with the safety evaluation report, the operating license or to the code of federal regulations.

The U. S. Nuclear Regulatory Commission (NRC) is currently assessing the need to review the 41 older nuclear power plant units referred to

as the Systematic Evaluation Program Phase III (SEP-III) plants. Generic Safety Issue (GSI) 156-6.1 (R. Emrit, et al., 1993) deals with whether the effects of pipe break inside containment have been adequately addressed in these plants' designs. The NRC originally evaluated a majority of the SEP-III plants before they issued Regulatory Guide (RG) 1.46 in May 1973 (AEC, 1973b). Although the NRC reviewed these plants, there is a potential lack of uniformity in those reviews due to the absence of documented acceptance criteria. The NRC is now attempting to assess the impact of not having such criteria in place.

The extent of the violations are breathtaking, and involve a substantial prima facie breach of Administrative Procedures Act (APA) by the Federal Agencies over almost four decades for Indian Point 2. Beginning in 1968, the Nuclear Regulatory Commission acted in direct defiance of the Administrative Procedures Act by approving Amendment Nine of the Operating License, (contained in exhibit I) in which the Licensee acknowledged commitments to *trade comments* to draft General Design Criteria for its new plant. In addition, the Licensee committed to trade comments to the proposed General Design Criteria, and erroneously claimed that the trade organization comments were published in the Federal Register

for public comment in July, 1967, when in fact they were never properly published (see Exhibit J)

The Licensee claimed adherence to a General Design Criteria required for the licensing of Indian Point 2 facility, and committed to such General Design Criteria in the 1970 SER. In actuality, the plant design, programs and procedures *were licensed to trade industry-endorsed commentary* as opposed to the General Design Criteria for the LRA and subsequently approved by the Atomic Energy Commission under the 1970 Safety Evaluation Report (See Exhibit K) bypassed the federal rules as found under the rule making process. The draft GDCs were published and approved for use more than 13 months prior. This fundamental failure of oversight by the regulator was subsequently set aside and festered, while the commission quietly authorized by retroactive fiat that the licensing process proscribed under federal rules for Indian Point 2 could remain in violation of law. This series of events is evidenced by close examination of documents cited or submitted in the applicant's LRA. The commission dealt with the design basis and license failures with a stroke of a pen in 1992. (see exhibit L)

The table below best provides the chronology as well as the facts, and the implications to the renewal license application fidelity. In simplest terms the Licensee and NRC with the acceptance of the GDC defined in

Amendment 9 to the original application for license accepted a draft industry

GDC in place of the actual GDC for IP2.

Date:	Docketed Activity	Reference	Implications to fidelity of the License Amendment
November 22, 1965	Early draft General Design Criteria published by AEC for comment	November 22, 1965 Press release from AEC. No FR notice	For consideration by Con Ed in decision to Construct Indian Point 2
October 14, 1966	By application dated December 6, 1965, and amendments thereto (the application), the applicant applied for the necessary licenses to construct and operate a nuclear power reactor at the applicant's site at Indian Point, Village of Buchanan, Westchester County, New York.	The Commission, after a public hearing and after an initial decision by the Atomic Safety and Licensing Board (the Board), established by the Commission, issued Construction Permit CPPR-21 for this facility	The application was evaluated by the Commission's regulatory staff and independent Advisory Committee on Reactor Safeguards (ACRS), both of which concluded that there is reasonable assurance that the facility could be operated at the proposed site without undue risk to the health and safety of the public. On October 14, 1966,
July 11, 1967	AEC publishes draft General Design Criteria under federal rule making processes.	Federal Register 32 FR 10213	Note that the draft GDCs were never made a part of Appendix A of 10CFR50.
October 2, 1967	Atomic Industry Forum, a trade organization provides significant comments regarding draft GDCs published.	Provided directly to Atomic Energy Commission without publication in the federal register	AIF general proposed removal of conservatism in draft General Design Criteria. These changes were never approved by the AEC.
October 15, 1968	Former owner of Unit 2 submits Amendment 9 of application of license	AEC Docket No. 50-247-- correspondence from Con Ed to Director of Division of Reactor Licensing Atomic Energy Commission	Facility that was now more than 2 years into construction was being constructed following unapproved trade documents – however, the letter states on page 1.3-1 that the unapproved “general design criteria tabulated explicitly in this report comprised of the proposed AIF versions of the criteria issued for

Date:	Docketed Activity	Reference	Implications to fidelity of the License Amendment
			comment in July 1967.”
February 1970		See January 28, 1971 NRC discussion of AIF GDC comments.	The staff met with an ad hoc AIF group, which included representatives of reactor manufacturers, utilities and architect engineers to discuss the revised General Design Criteria. The comments of this group were reflected in a June 4, 1970 draft of the revised General Design Criteria that was forwarded to the AIF for comment. The AIF forwarded comments and stated it believed the criteria should be published as an effective rule after reflecting its comments. These comments have been reflected in the General Design Criteria in Appendix "A".
November 16, 1970	<p>Safety Evaluation Report</p> <p>Commission grants operating license based upon amendments 9-25 of application for license by Con Edison.</p>	Incorporated License amendments 9-25 to the application and the FFDSAR -includes ALSB, ACRS review et al.	<p>“Our technical safety review of the design of this plant has been based on Amendment No. 9 to the application, the Final Facility Description and Safety Analysis Report (FFDSAR), and Amendments Nos. 10-25, inclusive. All of these documents are available for review at the Atomic Energy Commission's Public Document Room at 1717 H Street, Washington, D.C. The technical evaluation of the design of this plant was accomplished by the Division of Reactor Licensing with assistance” from the Division of Reactor Standards and various consultants to the AEC.</p> <p>This document gave them authority to operate the facility under the draft GDCs but without the AIF comments specifically for the Reactor Protection and Control System.</p>

Date:	Docketed Activity	Reference	Implications to fidelity of the License Amendment
			As noted, "Specifically, for the reactor protection system instrumentation for -Indian Point Unit 2 is the same as that installed- at the Ginna plant. The adequacy of the protection system instrumentation was evaluated by comparison with the Commission's proposed general design criteria published on: July 11, 1967, and the proposed IEEE criteria for nuclear power plant protection system (IEEE-279 Code), dated August 28, 1968. The basic design has been reviewed extensively in the past and we conclude that the design for Indian Point 2 is acceptable".
February 20 1971 through July 11 1971	Formerly Draft GDCs are approved Final GDCs and become part of Appendix A to 10CFR50. They are amended the same year.	Published in FR. on February 20 1971, and amended on July 11, 1971	These are the first legal standards for which the plant is required to comply or under federal rules, or be granted an exemption.
November 4, 1971	A third modified construction permit was issued for Units #1 and #2. The proposed relocation of the intake structures by Con Edison was a significant improvement and entered into this decision.		The USAEC is urged to require Consolidated Edison to establish a firm schedule for implementing this proposed modification because of changes in the design of the adjustable discharge ports and slide gates.
September 28, 1973	Unit 2 Operating License Received		SER states that the plant is licensed to 1967 draft general design criteria without endorsement of AIF comments.
Commission issues a confirmatory order on February 11, 1980	Unit 2 FSAR dated June 2001 states that the detailed results of the order indicate that the plant is in compliance with the then current General Design Criteria established in 10CFR50		The commission concurred on January 1982.

Date:	Docketed Activity	Reference	Implications to fidelity of the License Amendment
	Appendix A.		
September 18, 1992	SECY 92-223, "resolutions of deviations identified during the systematic evaluation program"	Letter to James Taylor, Executive Director for Operations	<p>The Commission approved the staff proposal in which the plant will not be required to comply with federally approved General Design Criteria, if construction permits were issued prior to May 2, 1971.</p> <p>This appears to be a clear and flagrant violation of the Administrative Procedures Act.</p>
June 2001	Unit 2 FSAR states incorrectly that the General Design Criteria tabulated explicitly in the pertinent systems comprised the proposed trade organization general design criteria.	Section 1.3 General Design Criteria, Unit 2 UFSAR, and indicates under a footnote that the safety analysis report added trade organization comments in the change to the FSAR. (see footnote within Section 1.3.)	<p>The license with collateral endorsement of the federal regulatory agency bypassed the administrative rules act, and thus reduced its commitments made to obtain its operating license to less than the minimum legal requirements of 10CFR50 Appendix A which were made law more than two years prior to the NRC granting the applicant an operating license for Unit 2.</p> <p>The reductions of margin and reasonable assurance of protection of the health and safety of the public were compromised for three decades, without the public understanding of the loss of margin in safety. Subsequently, the applicant (now Entergy) allowed the error to remain and is actually currently committing Unit 2 to trade organization design criteria.</p>

The Licensee's failure to adhere to a legally enforceable General Design Criteria substantially reduces safety margins for safe plant operation, by severely reducing detection of and the consequential mitigation of

accident conditions resulting in substantial reduction in protecting the health and safety of the public.

The Nuclear Regulatory Commission continued this pattern of bypassing the Administrative Procedures Act in 1992, (see exhibit I), in which the regulator relieved the Applicant of *all* compliance enforcement to any General Design Criteria, without any attempt to abide by the Administrative Procedures Act.

The Commission belief that it could use guidance documents from trade organizations in lieu of rules as was adjudicated in *Metropolitan Edison Company, et al. (Three Mile Island Nuclear Station, Unit No. 1) ("TMI")* ALAB-698, 16 NRC 1290, 1298-99 (October 22, 1982), affirming *LBP-81-59, 14 NRC 1211, 1460 (1981)*, where it was established that the criteria described in NUREG-0654 were intended to serve solely as regulatory guidance, not regulatory requirements). Indeed, the Commission's mere reference to NUREG-0654 in a footnote to 10 C.F.R. § 50.47 was found to be insufficient to incorporate that guidance document by reference as a part of a federal regulation, even if the Commission had intended to do so.

The Nuclear Regulatory Commission continues this approach today without any hint of complying with the rules of the Administrative Procedures Act (APA). In summary, the Applicant is obligated to meet the requirements

of the General Design Criteria as published on July 11, 1967. In fact, the Applicant falsely states that it is in compliance on page 3 of the LRA. Indian Point 2 LLC plant was designed, constructed and is being operated on the basis of the proposed General Design Criteria, published July 11, 1967. Construction of the plant was already underway when the Final Facility Description and Safety Analysis Report was filed on December 4, 1970, and when the Commission published its revised General Design Criteria in February 1971, and final version of the General Design Criteria in July 1971, which included the false statement, "As a result, we did not require the applicant to reanalyze the plant on the basis of the revised criteria. However, our technical review assessed the plant against the General Design Criteria now in effect and we have concluded that the plant design conforms to the intent of these newer criteria."

The Applicant was not in compliance with 10CFR50 Appendix A then, and is not in compliance with 10CFR50 Appendix A now, as provided in current 2006 Unit 2 UFSAR submitted as a part of its relicensing application.

Subsequent to the issuance of the Operating License, the Nuclear Regulatory Commission issued many Bulletins, Orders, Generic Letters, and Regulatory Guides. Most of the Regulatory Guides address the Nuclear Regulatory Commission's interpretation of the meaning of the requirements of

the 1971 General Design Criteria. Inference could be made that regardless of the legal basis of these orders, if one accepts them as legal, one must also accept the legal requirement of compliance to the specific relevant 1971 General Design Criteria. However, the process clearly violated the Administrative Procedures Act regarding the incorporation by reference on regulations such as violation of 10CFR50.21², regarding equipment aging program scope by using a methodology that is entirely addressed under NUREGS prepared and promulgated outside rulemaking procedures and industry trade guidelines such as NEI 95-10 Rev. 6, each of which has no legal force. Neither public involvement nor the most fundamental steps required under the Administrative Procedures Act were adhered to by either the Applicant or the Federal Agency.

² (a) Plant systems, structures, and components within the scope of this part are--

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions--

(i) The integrity of the reactor coolant pressure boundary;

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) All nonsafety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section.

(3) All systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).

(b) The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the bases for including them within the scope of license renewal as specified in paragraphs (a)(1) - (3) of this section.

[60 FR 22491, May 8, 1995, as amended at 61 FR 65175, Dec. 11, 1996; 64 FR 72002, Dec. 23, 1999]

Pursuant to section 3(a)(1) of the Administrative Procedure Act, 5 U.S.C. § 552(a)(1), as implemented by the regulations of the Office of the Federal Register, 10 CFR Part 51, no material may be incorporated into a rule by reference unless the agency expressly intends such a result, 10 CFR. § 51.9, requests and receives the approval of the Director of the Office of Federal Register, 10 CFR §§ 51.1, 51.3, and the Federal Register notice indicates such specific approval, 10 CFR § 51.9.

A brief review of statutory/regulatory construction confirms the method for incorporating Regulatory Guides . Here 10 CFR Part 50, Appendix E, n.1; NRC Staff Regulatory Guide 1.101, Rev. 2 (October, 1981) specifically endorses the incorporation by reference to the criteria and recommendations in NUREG-0654 as "generally acceptable methods for complying" with the standards in 10 CFR § 50.47. The NRC's emergency planning rules, however, include neither such a designation nor any express intention that NUREG-0654 be incorporated by reference.

In the absence of other evidence, adherence to NUREG-0654 may be sufficient to demonstrate compliance with the regulatory requirements of 10 CFR § 50.47(b). However, such adherence to NUREG-0654 is not required, because regulatory guides are not intended to serve as substitutes for regulations. *TMI, ALAB-698, supra, 16 NRC at 1298-99.* "Methods and

solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission." *Id.* at 1299, quoting *Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2)*, ALAB-644, 13 NRC 903, 937 (1981). We believe the atomic licensing board erred in this decision. This error was confirmed in the recent ruling regarding storage of spent fuel requiring a NEPA proceeding compliance prior to the NRC approval. See *San Luis Obispo Mothers v. NRC 03-74628*

Examples include certain Regulatory Guides that provide requirements for post-accident monitoring of the TMI incident. These Regulatory Guides describe a method that the NRC staff considers acceptable for use in complying with the agency's regulations and delineate an acceptable means of meeting the General Design Criteria as contained in 10 CFR 50 Appendix A. More than 100 Regulatory Guides have been issued, amplifying the requirements of the General Design Criteria.

Consider the U.S. Nuclear Regulatory Commission (NRC) developed Regulatory Guide 1.97 to describe a method that the NRC staff considers acceptable for use in complying with the agency's regulations with respect to satisfying criteria for accident monitoring instrumentation in nuclear power plants. Specifically, the method described in this Regulatory Guide relates to

General Design Criteria 13, 19, and 64, as set forth in Appendix A to Title 10, Part 50, of the Code of Federal Regulations (10 CFR Part 50), “Domestic Licensing of Production and Utilization Facilities:

Criterion 13, “Instrumentation and Control,” requires operating reactor licensees to provide instrumentation to monitor variables and systems over their anticipated ranges for accident conditions as appropriate to ensure adequate safety.

Criterion 19, “Control Room,” requires operating reactor licensees to provide a control room from which actions can be taken to maintain the nuclear power unit in a safe condition under accident conditions, including loss-of-coolant accidents (LOCAs). In addition, operating reactor licensees must provide equipment (including the necessary instrumentation), at appropriate locations outside the control room, with a design capability for prompt hot shutdown of the reactor.

Criterion 64, “Monitoring Radioactivity Releases,” requires operating reactor licensees to provide the means for monitoring the reactor containment atmosphere, spaces containing components to recirculate LOCA fluids, effluent discharge paths, and the plant environs for radioactivity that may be released as a result of postulated accidents. The licensee has responded to these communications and states compliance with these communications and makes a commitment in the UFSAR.

In these examples, the Applicant included the NUREG language in the FSAR, and by inference one could argue compliance in this case with General Design Criteria 1971. The Applicant could not, however, use the Aging Management Program to argue compliance with other cases, and certainly cannot use the program exclusively. The Applicant is potentially holding open

options that should be eliminated under the Aging Management Rule. (See Contention 3).

A dispositive example is “General Design Criteria” Criterion 35-
Emergency core cooling:

A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts. Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is available) the system safety function can be accomplished, assuming a single failure.

See General Design Criteria 35, Final design criteria (10 CFR 50 appendix A approved 1971, (36 FR 3256, Feb 20, 1971)

The IP2 Final Safety Analysis Report (FSAR) does not address Criterion 35 at all. In neglecting to do so, the IP2 FSAR leaves the General Design Criteria meaningless in its intent to protect the health and safety of the public, and places the plant in clear violation of 10CFR50 Appendix A.

A detailed list of specific violations contained within 10 CFR Part 54 will be provided in supplemental submittal to this contention. An example is

(Contention 4) provided below from review of the limited material available to FUSE by the Licensee, and the regulator.

Criterion 10, Reactor design, in which the reactor core and associated coolant, control, and protection systems must be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.

FSAR Section 5.1.1.1.5, Reactor Containment substantiates the Criterion with the following additions:

The containment structure shall be designed (a) to sustain, ***without undue risk to the health and safety of the public***, the initial effects of gross equipment failures, such as a ***large reactor coolant pipe break***, without loss of required integrity, and (b) together with other engineered safety features as may be necessary, to retain for as long as the situation requires, the functional capability of the containment to ***the extent necessary to avoid undue risk to the health and safety of the public.*** *[italics added by Stakeholders]*

These additions provide latitude and judgment to the Applicant as to what the Architects and Engineers need to do in order to minimally satisfy the criteria ***but do not support the right for public review of the pertinent documents in a public forum.***

A brief review of Tech Spec requirements contained in Exhibit L confirms that the misrepresented statement in the FSAR regarding General Design Criteria for Unit 2 is followed through with improper implementation.

For example, Reactor Coolant Leakage. In LCO 3.4.13, reactor containment pressure leakage from primary to secondary systems *is allowed in quantities up to 150 gallons per day.* Such quantities are much larger than reasonable limits implicit under General Design Criterion 35. This non-conservative quantity may have contributed to the root cause of the 2000 tube rupture accident and is intolerable as an acceptable quantity for age management of the RCS leakage.

A second example may be found in examination of General Design Criterion 45, through General Design Criterion 6.2.1.2. Inspection of Emergency Core Cooling System Criterion is the following: Design provisions shall, where practical, be made to facilitate inspection of physical parts of the emergency core cooling system, including reactor vessel internals and water injection nozzles. (General Design Criteria 45). *Here the trade organization inserted the words “where practical”* (see Exhibit N page 14).

The Applicant bypasses the rules, by failing to properly examine or replace reactor core internal components with known susceptibility to failure on multiple occasions. For example, the components such as baffle bolts that hold down springs, lower core barrel, and lower core plate are routinely UT or VT'd during outages and often replaced. (See exhibit P)The process involves a machine that typically removes and replaces bolts in an automated

procedure which adds two weeks to an outage. Despite the higher reliability of such a process, Indian Point 2 has chosen instead to rely on water chemistry tests which are meaningless for assessing bolt integrity. The reasoning behind the reliance on an inferior method of testing is financial: Water chemistry tests enable Indian Point 2 to substantially reduce lost revenue by shortening the outage time (some estimates are in the order of millions of dollars per outage day), despite the fact that the health and safety of the public is sacrificed. See exhibit P and declaration of Ulrich Witte, Exhibit Q. This is a prima facie violation of 10CFR50 Appendix A.

The Applicant attempts to placate the issue with the following words contained in the LRA, "To manage loss of fracture toughness, cracking, change in dimensions (void swelling), and loss of preload in vessel internal components, the site will (1) participate in the industry programs for investigating and managing aging effects on reactor internals; (2) evaluate and implement the results of the industry programs as applicable to the reactor internals; and (3) upon completion of these programs, but not less than 24 months before entering the period of extended operation, submit an inspection plan for reactor internals to the NRC for review and approval." See section A.2.1.141 of the LRA report.

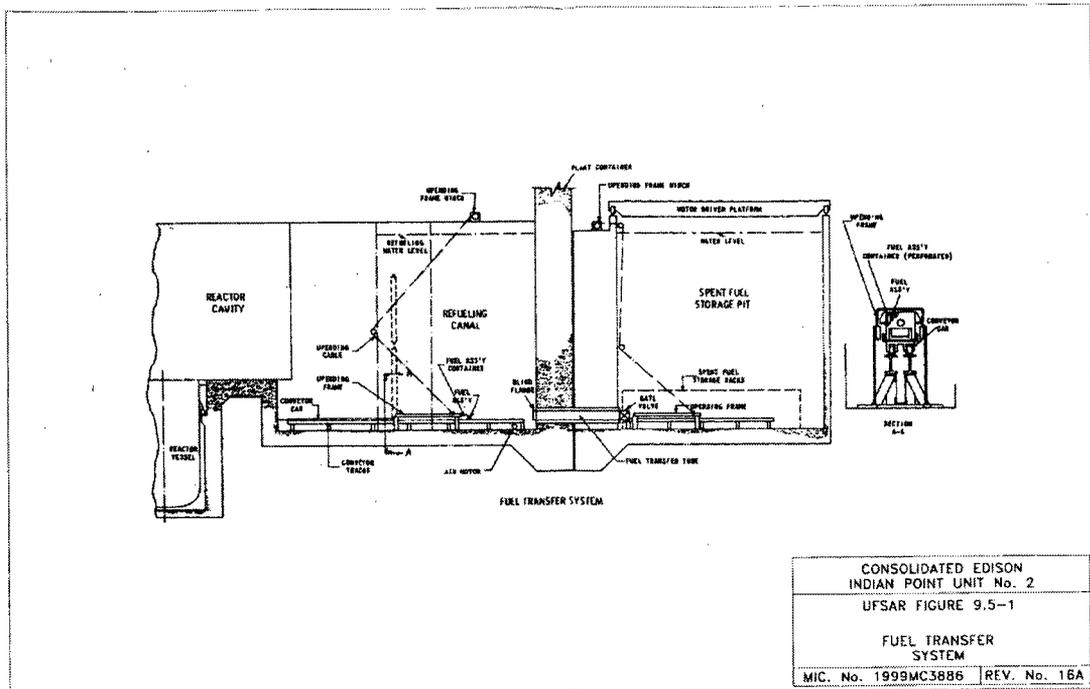
This language essentially removes this entire matter from the public's

right of input and participation. It is another example of “Agree to agree” and bypasses the procedures required by law through the Administrative Procedures Act.

Alternative methods that act as proposals to comply with the federal rules for license renewal represent guidance only, unless explicitly cited, and developed within the confines of the Administrative Procedures Act. The above examples meet the standards for specific contentions as cited above.

This serious and deliberate practice of rewriting federal code without public input is in clear violation of the Administrative Procedures Act and invalidates the plans proposed for the technical, safety, and environmental aspects of entire LRA, even setting aside the issues of a lack of completeness and vagueness of the description.

The misrepresentation has become routine, and the violations so acceptable, that the NRC only days ago published a notice regarding a leaking and aging 20-inch pipe, described as a “conduit” with a pinhole leak.



1. Misrepresentation does violence to the entire intent of the agency, and the Applicant's failure to comply with specific rules of 10 CFR 54, and further violates the Administrative Procedures Act. For example, the 20-inch "conduit" is not considered part of the Aging Management Program or part of the environmental program, and the lack of inspection and maintenance of it is not considered unlawful. See exhibit R, and we ask that this be considered Contention Number 5

The breadth and depth of these contentions are extreme. Even if each issue is classified in the narrow confines of the scope of the Rule (but not the GALL Report (see NUREG 1801 Rev. 1), the egregious conduct by the

applicant and the regulatory failure raises questions about any statement made in the LRA, or the Current Licensing Basis for Unit 2. The Current Design Basis for Indian Point 2 is unknown, unmonitored, and the material condition also unknown. These conditions associated with the CLB were the exact bases for permanent closure of Millstone Unit 1. These findings for Indian point 2 are clearly analogous, and a new superseding license should without question be denied.

For those issues raised here, no forum is available to adjudicate the magnitude of the misrepresentation and unlawful acts. FUSE questions how a Board selected by the Commission can be allowed to judge the acts of the very Commission that selected it (such as the 1992 letter contained in Exhibit M). The Administrative Procedures Act under chapter 5 provides for adjudication in the federal court for exactly this kind of broad unlawful act.

- A. Contention 6: The License Renewal Application (LRA) fails to provide sufficient detailed information regarding technical, safety and environmental pendant issues as required by 10 CFR 2.309.

Issue statement: FUSE asserts that the Applicant's LRA has not met the threshold of providing explicit specific technical information as required under 10 CFR54, specifically with regard to Equipment Environmental and the Qualification Program, Flow-accelerated Corrosion Program.

The license renewal application submitted by applicant on May 3, 2007 and subsequently revised on June 22, 2007 fails to meet the threshold of providing explicit specific technical information as called for under 10 C.F.R. § 2.309, which plainly calls for “*how the applicant will comply with the requirements*” promulgated in CFR54.21 and requires both a complete description of each program and a description of how the applicant will specifically address Aging Management.” In the LRA submitted by the Applicant, these threshold requirements, are not included, or provided other than with non-specific conclusory statements.

Specific examples of incomplete and inadequate technical information include, but are not limited to: the Equipment Environmental Qualification Program, the Flow-accelerated Corrosion Program, in which the Applicant provided a one paragraph description of its planned Aging Management Program, which essentially credited the current Flow-accelerated corrosion (“FAC”) program with no further explanation. Here, the Applicant points to the present Current Licensing Basis (“CLB”) as sufficient. This is an ambiguous and generic approach that is rejected under both NUREG 1801, and 10CFR54 as well. The rules require that a specific and particularized program define component and system scope, inspection criteria,

methodology, frequency and remediation commitments when acceptance criteria for FAC inspections are not met.

This contention is fundamentally material to the Indian Point License Renewal Proceedings as a matter of law. The Applicant's failure to comply with the 10 CFR54 rules setting forth Age Related Management Programs, makes it virtually impossible to review the legal or technical integrity regarding each of these programs. This raises fundamental and material issues to the entire LRA content as submitted by the Applicant.

- B. Contention 7: Co-mingling three dockets, and three DPR licenses under a single application is in violation of C.F.R. Rules, Specifically 10 CFR 54.17 (d) as well as Federal Rules for Civil Procedure rule 11(b).

Stakeholders assert that the Applicant's single LRA for three distinct licenses and nuclear plants is a violation of 10 CFR 54.17(d), as well as the Federal Rules for Civil Procedure Rule 11(b), thereby causing the LRA review to be overly complex, unclear, and unduly confusing, and should be denied by the NRC.

The applicant has violated rule 10 CFR §54.17 (d), which states,

An applicant may combine an application for a renewed license with applications for other kinds of licenses.

This does not mean or intend to mean that the Applicant can co-mingle two applications for two license renewals, for Indian Point 2 and Indian Point 3, into one LRA filing. To make things even more complicated, components of Indian Point 1, which has been shut down for 30 years, are used by Indian Point 2, therefore Indian Point 1's Safestor status must be incorporated by reference. IP2 and IP3 hold completely separate licenses to operate nuclear reactors. Each license is further held by a separately owned and controlled Limited Liability Corporation. In addition, the Applicant violates procedure governed by 10 CFR by not distinguishing the current Safestor status of Unit 1 decommissioning, and in fact seeking approval to make use of Unit 1 systems and/or components/infrastructure for extended operation of Unit 2, and to a lesser degree Unit 3.

Co-mingling applications is particularly material to Indian Point 2 and 3 given that each license has (1) separate dockets [50-247 and 50-286], (2) separate DPR numbers, (3) separate owners and License holders for most of their first 30 years of operation, and (4) separate Architect/Engineers.

The Nuclear Regulatory Commission itself at the annual assessment meeting has admitted the plants have entirely different histories, different design control and configuration management programs. The NRC held and

will continue to hold separate reviews to discuss each reactor licensee's separate issues prior to opening the meeting for public questions.

Indian Point 2 and Indian Point 3 had and continue to have distinctly different Current Licensing Bases (CLB), and have evolved away from each other via a multitude of different design modifications.

The Contention that the Applicant has wrongfully commingled and cojoined the applications for IP2 LLC and IP3 LLC is buffered and strengthened by the fact that the NRC itself has assigned separate onsite plant inspection teams to each individualized reactor.

Indian Point 2 has been repeatedly in "white status" for the past 10 years, and Indian Point Unit 3 was on the NRC's watch list during the 90s, while the plants have been subjected for over 30 years to different corrective action programs, and different design control programs; and each has its own set of active licensing commitments with respect to their Current Operating License and plant technical specifications.

- C. Contention 8: The NRC violated its own regulations by accepting a single License Renewal Application made by the following parties: Entergy Nuclear Indian Point 2, LLC ("IP2 LLC"), Entergy Nuclear Indian Point 3, LLC ("IP3 LLC"), and Entergy Nuclear Operations, LLC. (Entergy Nuclear Operations).

Issue Statement: FUSE asserts the ownership and legal liability associated with the superseding licensing is incomplete and inaccurate as described in

Entergy's application for renewal by not including holding companies that differ for each plant (see exhibit S, organizational figures), and that the NRC should not transfer the license from one LLC to another in the middle of a LRA review as announced by an entirely different holding company in Entergy's letter dated July 30, 2007, see exhibit S.

Based upon the documents submitted in the July 30, 2007 letter, the current license does not correctly describe the owners of the Unit 2 facility, the operators of the Unit 2 facility are not unambiguous and cause undue confusion of ownership regarding matters relevant to future decisions, especially concerning extended operations regarding the superseding license being proposed.

Even though named on the current operating license, Entergy Nuclear Operation Inc. cannot be a party to the LRA, and should not be named on the current operating license, because it lacks the necessary direct relationship between the Licensees and Entergy Nuclear Operations. Nor is Entergy Nuclear Operations, Inc. involved in daily operations or record keeping, in direct violation of 10CFR50.

Entergy Nuclear Operations is not currently the operator or direct owner of the license, and thus does not have direct control over the license, nor does it maintain records or additional records as required by 10CFR54.35 and 10CFR54.37.

In the case of Indian Point 2, the immediate owner is Entergy Nuclear IP2, LLC. This LLC is in turn owned by Entergy Nuclear Investment Company III, Inc., which is a wholly-owned subsidiary of Entergy Nuclear Holding Company #3 that, in turn, is a wholly-owned subsidiary of Entergy

Nuclear Holding Company. Entergy Nuclear Holding Company, Inc. is a direct subsidiary of Entergy Corporation. The NRC's own staff have expressed serious doubts as to the NRC's ability to hold a parent corporation responsible for the liabilities incurred by a subsidiary.

A particular concern is that each intervening LLC can act as a barrier to extending liability to the parent corporation that contains most of the assets. Several separate litigations, or a very large and complex single litigation would be required to pierce all the corporate veils back to the parent corporation with the bulk of the assets. (*Synapse Energy Economics, Inc Financial Insecurity* pg 12 attachment see exhibit V).

Just two days prior to formal application acceptance by the Staff it was announced in the Federal Registry, Entergy Nuclear Operations filed for a transfer of Indian Point 2 license DPR-26 and Indian Point 3 license DPR-64 to Entergy Nuclear Operations, an indirectly related corporation, which would result in substantial reorganization of Entergy's corporate structure and LLC holdings, affecting the fiscal responsibility and liabilities of Indian Point 1, Indian Point 2 and Indian Point 3.

This whole overly complicated corporate structure overlay on top of another corporate structure overlay, is akin to Abbot and Costello's who's on first, and who's on second, but the humor dissolves when the questionable

motivation and the detrimental consequences to the health and safety of the public become apparent.

This overly complicated corporate structural overlay has severe consequences to reasonable assurances of health and safety of the public.

The motivation behind this requested license transfer is revealed when one reviews how the parent corporation of Entergy handled its fiscal liability with regards to Hurricane Katrina events by comparing the historical actions of the parent company and understanding how Entergy ducked the fiscal liability associated from the Katrina events.

In the aftermath of Katrina, Entergy New Orleans, a subsidiary of the The Entergy Corporation, filed for Chapter 11 bankruptcy, even though the parent corporation continued to have ample finances. This corporate hide and seek resulted in Entergy Corporation receiving massive government bailouts from taxpayers monies, while ratepayers in New Orleans experienced a substantial increase in energy costs.. (Exhibit W cite Rita King article).

The NRC has no statutory authority to require a licensee in bankruptcy to continue making safety-related or decommissioning expenditures or to pay retrospective Price-Anderson Act premiums. Therefore, any transfer of the licenses in the middle of an LRA proceeding brings into scope Entergy's entire corporate structure and complex financial qualification review to

continue operating the licenses during the license renewal period of 20 years.

We claim this very issue as another non numbered contention.

Moreover, the timing of this transfer application creates the opportunity for the NRC staff to do less than an adequate review, as was found by the GAO in previous reviews performed {reference GAO report exhibit X}, and diverts the NRC staff's full attention from the technical requirements and assurances of public health and safety during the LRA reviews, to devote substantial resources and attention for a complex financial qualification review.

The General Accounting Office has found that the NRC has done an inadequate analysis regarding the fiscal responsibility during license transfers in the past, affecting commitments or lack thereof, including but not limited to such items as the decommissioning funds (specifically relevant to Unit 1 and Unit 2 license renewal). The proposed transfer of the license materially affects the fiscal resources and clear liability for each of the three Indian Point Units.

If the NRC reviews and approves this proposed license transfer in the middle of the LRA review, it will add undue confusion and complication resulting in harm to the Stakeholder's rights, in turn causing potential harm to the public's health and safety.

B. Contention 9: The Decommissioning Trust Fund is inadequate and Entergy's plan to mix funding across Unit 2, 1 and 3 violates commitments not acknowledged in the application and 10 CFR rule 54.3.

Issue Statement: FUSE asserts that the Applicant's decommissioning trust fund balances are inadequate and insufficient to properly decommission the site, as required by 10CFR 54.3 to restore the site. Therefore, due to the inadequacy of the decommissioning trust funds, the NRC cannot approve a new superseding license for an additional 20 years.

Indian Point 2 has insufficient decommissioning trust fund balances, as required by 10 CFR 50.75, to restore the Indian Point site, including removal of underground radioactive contamination in the bedrock under the plant.

Per NRC Section PART 50 Sec. 50.75: Reporting and recordkeeping for decommissioning plan Indian Point's decommissioning funds are inadequate to clean up the bedrock site from the ongoing underground leaks. The costs for complete decommissioning and cleanup of the site must be adjusted to reflect significant changes in the contamination streams including the large underground radioactive leaks. However the Applicant has not evaluated, calculated or considered the actual decommissioning funds required to decontaminate the site in light of ongoing massive underground radioactive effluent and leaks.

2. Basis for Contention

The Indian Point 2 decommissioning fund has not been adjusted to take into consideration the enormous, underground radioactive contamination accidentally discovered in 2005. The current decommissioning plan for aging management of the plant is inadequate to clean up the bedrock site and is not addressed in the Applicant's LRA. The costs for complete and correct decommissioning and cleanup of the site must be adjusted to reflect the large underground radioactive leaks, as required by:

Section PART 50 Sec. 50.75 (2) (e)(1)(v); any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and any material changes to trust agreements.... or where conditions have changed such as:

(iii) The current situation with regard to disposal of high-level and low-level radioactive waste;

(iv) Residual radioactivity criteria;

(v) Other site-specific factors which could affect decommissioning planning and cost;

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site.

These records may be limited to instances when significant contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations., or certification is used.

It has been acknowledged by the NRC that numerous systems, structures and components can experience undetected radioactive leaks over a prolonged period of time and that “relatively large volumes of contamination above the decommissioning release limits” can result in “notable increases in remediation time and costs” in the sums of hundreds of millions of present value dollars. *NRC’s Liquid Radiation Release Lessons Learned Task Force Final Report*, ML062650312 2006-09-013.4.3 The past and present leaks at Indian Point 2 provide indicia of continued and future leaks. In 2006 Don Mayer, Director of Special Projects for Entergy said that "The underground area of the Indian Point site has contaminated water that is 50 to 60 feet deep, ...and there is also another area, or underground plume, that is about 30 feet wide by 350 feet long."

3. Contention is within scope in the licensee renewal process

In the Matter of Power Authority Of The State Of New York And Entergy Nuclear Fitzpatrick LLC, Entergy Nuclear Indian Point 3 LLC, And Entergy Nuclear Operations, Inc. (*James A. FitzPatrick Nuclear Power Plant and Indian Point Nuclear Generating Unit No. 3*) Docket Nos. 50-333-LT and 50-286-LT regarding the license transfer to Entergy, the Nuclear Regulatory Commission held that decommissioning shortfall “did not fall within the

scope of this license transfer proceeding, as Entergy Indian Point was not seeking in its application to renew or extend the Indian Point 3 operating license, nor does its pending application assume such a request.

The Commission further states, “that regarding decommissioning Stakeholders have the right to seek intervenor status in any application for license renewal or license extension that Entergy Indian Point may file.” Therefore, based on the Commission’s own decision, the issue of whether there are adequate decommissioning funds is within scope of the licensing renewal proceedings.

4. Contention raises a material issue of fact or law

The method of cost analysis of adequate decommissioning funds must be clearly stated in the LRA. The Applicant’s LRA fails to outline an adequate decommissioning and clean up plan in light of the large amounts of underground radioactive waste, for which the source has not yet been identified, and therefore the extent of the contamination remains unknown.

The Applicant initiated actions to pump out the Unit 1 Containment Spray Sump through a filter/demineralizer system, designed to remove Strontium 90, and investigate the source and means of the Strontium 90 groundwater contamination. This raises the question: is Entergy in violation of the terms of their SAFESTOR for Indian Point 1. When the Applicant

started to remove the underground leaks by pumping the radioactive contamination out of the ground, it caused more radioactive material to be released. Therefore, the NRC ordered the Applicant to stop removing the radioactive effluent from ground, and to monitor it while the issue was further investigated. The NRC has ordered that the contaminated materials remain under the plant in the bedrock, until some date uncertain when Applicant figures out a method to find, stop and remediate the Radiation Leaks. Until that time radioactivity will continue to leach into the groundwater and the Hudson River.

At a recent annual assessment NRC meeting in Croton, NY, NRC officials stated that since they can't dig the radioactive contamination out, and can't blast it out, therefore they will have to chisel out the tritium, cesium and strontium from the bedrock. If such remediation work is required to bring the reactor site into compliance with NRC guidelines and PART 50.7 it will require additional protective actions during the remediation work to keep radioactive contaminants from migrating off site, and exposing both humans, workers and the public, as well as the environment, to unnecessary additional exposure risks and pathways.

In the NRC's Liquid Radiation Release Lessons Learned Task Force Final Report, ML062650312 2006-09-013.4.3, it was concluded and

recommended that, in some cases, such as Indian Point, the relatively large volumes of contamination above the decommissioning release limits resulted in notable increases in remediation time and costs. The NRC staff estimates the increased cost to be in the tens of millions of dollars, although specific actual cost data is not available to the staff.

The decommissioning reports for Indian Point 2 from 2002 to 2006 indicate that the Urban Inflation rate has been 2.9% per year, yet the adjustment of the decommissioning funds for IP2 has only been 1% per year. However, the decommissioning reports falsely state the escalation rate is 3.0%. The decommissioning funds for Indian Point have a substantial shortfall, as they are not even keeping up with the rate of inflation, as evidenced in the March 29, 2005 Report BVY-05-033/NL-05-039/JNP-05-005/Entergy Nuclear Operations Ltr.2.05.023 and the March 29, 2007 Report Entergy Nuclear Operations C-07-00007.

In addition, the storage of an additional 20 years of waste, either in the spent fuel pools or in dry cask storage, increases the risk to human health and safety far beyond the original Design Basis for this site. Additionally, the NRC has been discussing plans to store both LLRW and HLRW on site at reactor facilities for a period in excess of 100 years, while failing to provide the public with the protection standards that would be in place if a long term

LLRW or HLRW storage facility were cited at the facility. This lack of protections associated with forced onsite storage of radioactive waste streams must be addressed in the license renewal process. Spent fuel pools are not designed to meet the basic minimum requirements for structural stability and integrity, as is outlined in the citing criteria for new reactors in place at the time the NRC granted the original license, and it thus becomes imperative that the structural degradation indicated by the leaks of both Spent Fuel Pools 1 and 2 be addressed and remediated before the license renewal application is allowed to move forward.

Moreover, the dry cask storage facility at Indian Point presents an additional hazard and risk to New York (and other Northeastern states) that will very possibly continue for centuries. The costs of assuming these burdens cannot be placed on the taxpayers, but should be assumed by the Applicant which profits from the operation. These additional costs must be added to the decommissioning fund.

Even the Nuclear Energy Institute (NEI) recommends that although NRC regulations do not require the inclusion of used-fuel storage costs in decommissioning funds, companies should include such costs in their estimates, because no federal repository or interim storage facility is available.

The amount of decommissioning funds required to properly meet the requirements of the NRC 10CFR50.75 are a material issue of fact and law, and a full hearing on such costs and decommissioning funds must occur prior to the NRC approving a new superseding license for 20 years for IP2. The Stakeholders have raised a material matter of fact or law, thus meeting the burden for further review.

5. Contention is Supported by Facts and/or Expert Opinion

Stakeholders have met the minimal requirements of the 10 CFR rules and regulations in presenting this contention in a concise statement of the facts adequate to establish that said contention is entitled to a further and complete review of the issues contained herein. It is pointed out that the rules governing the license renewal process and hearings lay out some basic criteria that a stakeholder must meet to have a contention accepted for further review.

Section 2.309(f)(v) requires :

...a concise statement of the alleged facts or expert opinion which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue.

Additionally, it is pointed out that the rules and regulations dealing with hearings and contentions accepted therein goes further to define specifically

the minimum burden of proof necessary to have a contention accepted for further review and scrutiny:

An Intervener is not required to prove its case at the contention filing stage: "the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality as that is necessary to withstand a summary disposition motion." Statement of Policy on Conduct of Adjudicatory Proceedings, 48 N.R.C. 18, 22 n.1 (1998), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989). Rather, petitioner must make "a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate." *In Gulf States Utilities Co.*, 40 NRC 43, 51 (1994), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989).

The contention more than meets the minimal standards necessary for acceptance. The petitioner in this case had made "a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate."

The Stakeholders assert that the NRC must deny Indian Point 2's LRA because it does not clearly define and allocate decommissioning funds for an aging management program with regard to the adequacy of decommissioning funds or methodology of decommissioning, in light of the underground radioactive leaks, the addition of dry cask storage on site, and the addition of

low-level radioactive waste storage on site, due to the fact that Barnwell is closing in 2008, which by inference affects the LLC's budget for renewal and superseding license within section 50.13 "completeness and accuracy of the information", as it affects the continued aging and safe operations of Indian Point 2.

C. Contention 10: Inability to Access Proprietary Documents Impedes Adequate Review of Entergy Application for License Renewal of IP2 LLC and IP3 LLC.

Issue Statement: FUSE asserts that the Applicant's claims of proprietary status to nuclear industry documents and pertinent sections of the LRA, as well as relevant leak maps and leak reports thwarts the Stakeholders' ability to prepare and file contentions which must be supported by documentary evidence.

Stakeholders that may be adversely affected by a License Renewal Application (LRA) have a right to file a Petition to Intervene and a Formal Request for Hearing. (*§ 2.309 Hearing requests*) There are specific 10 CFR Rules and Regulations that define and spell out the duties and responsibilities of a citizen wishing to use its right to formally intervene in the process, and primary among these rules and regulations, is the filing of a contention. These contentions to be accepted must meet a minimal standard of proof in raising a contention of law or fact which is supported by a methodical presentation of

documents or expert witness testimony in support of the contention. In short, unlike an allegation, contentions must have some supportive evidence that there exists a true difference of opinion of fact or law that falls within the scope of the LRA.

From the date of acceptance of a LRA for review as is witnessed by notice in the Federal Registry, interested Stakeholders usually have exactly 60 days to submit their contentions (on October 2, 2007) with proper evidence, and formally request a hearing and status as an intervener. Stakeholders petitioned the NRC for extension of time to file contentions, and on September 18, 2007, the NRC granted a 60 day extension, until November 30, 2007.

Despite the additional 60 days, the NRC's liberal granting of proprietary status to nuclear industry documents and portions therein, including massive redactions [on the claim of proprietary information] in Application's LRA's for IP2 LLC and IP3 LLC and underlying supporting documents, make it impossible for Stakeholders to adequately review the LRA documents and form/support their contentions. The time necessary to file FOIA's, and to contest the Applicant's claim to proprietary entitlement in keeping documents from public view, or having portions of the LRA and underlying documents redacted takes longer than the time allotted for

Stakeholders to prepare and support their contentions in a fashion adequate to have them accepted for further comprehensive review.

Documents hidden under the guise of proprietary information from Stakeholders are denying Stakeholders their rights to redress under the laws of the United States of America, and under the guidelines of the NRC 10CFR Code of Regulations meant to protect human health and safety.

The time clock for submission of a Formal Request for Hearing, and Petition to Intervene should not begin until stakeholders have access to a full and complete set of un-redacted versions of the LRA and its underlying documents, including but not limited to the FSAR's (all versions), USFAR's (all versions), the most current and up to date company and/or NRC version of the Current Licensing Basis (CLB) which is described in 10 CFR 54.3 as:

Current licensing basis (CLB) is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC

bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

In addition Stakeholders must be given access to the plume maps and leak reports prepared by the Applicant and exhibited at public meetings, yet claimed as proprietary by the Applicant.

The NRC must use its discretion to weigh the value of public health and safety against commercial interests, especially with regard to environmental information. Until such relevant documents are made available for Stakeholder's review, it is inequitable for the NRC to close the window in which Intervenors may submit contentions and request a hearing with regard to the LRA.

1. Basis for Contention

(i) As Stakeholders and property owners living within 3, 10 or 50 miles of the Indian Point facility owned by two unique and separately owned Entergy Limited Liability Corporations, it is imperative in measuring any suspected and/or adverse risks/effects associated with the proposed actions sought in Entergy's LRA for IP2 LLC and IP3 LLC to have a clear understanding of what the License Renewal Application seeks, and be capable of measuring the reliability and adequacy of the aging management plans contained therein.

(ii) In measuring the potential risks and/or adverse effects associated with the proposed action (license renewal) the Stakeholders have done due diligence in working their way through the myriad complexities in the Applicant's LRA for IP2 LLC. Citizen volunteers, FUSE USA staff, attorneys and our industry expert have dedicated thousands of man/woman hours to fully understanding the repercussions of a 20 year license renewal on the community surrounding Entergy's Indian Point.

Despite best efforts on the part of the Stakeholders, the Applicant's claims of entitlement to Proprietary Information, and the NRC's granting of the Applicant's request for same, has created a situation where Stakeholders are barred from properly forming and supporting certain contentions Stakeholder's chose to raise during the limited window for submission of Intervener Petitions.

(iii) One example of the problems created by the Applicant's Claim of the information being proprietary in nature can be found in a cursory review of the most recent UFSAR's for IP2 LLC and IP3 LLC. The Applicant in its LRA refers to the safety analysis in these documents in justifying many aspects of the aging management program, or lack thereof, that will be relied upon in the 20 year period of operation should their LRA be granted. The redacted and publicly available versions of the USFAR's for IP2

and IP3 have over 80 percent of Chapter 14, which is the Safety Analysis, redacted. If Stakeholders cannot review the Applicant's safety analysis, they cannot formulate opinions based upon the facts or on the adequacy of the Applicant's proposed Aging Management Plan as outlined in the LRA.

Further examples revolve around industry documents that the Applicant relies upon in the formulation of its Aging Management Plans (and defense of same) that are not available for review under the same proprietary claims. Stakeholders know of issues regarding Boraflex degradation/failure in the spent fuel pools which brings into question the reliability and workability of the Applicant's aging management plan for the spent fuel pools at IP2 and IP3. An industry investigation into this issue, and the EPRI report on the findings is not publicly available, and is classified as proprietary in nature, even though taxpayer funds (provided by DOE) were used in the creation of said work product. A challenge to this proprietary claim could take months, even years to resolve.

(iv) One FOIA filed with the DOE has been fulfilled in part, with additional document delivery promised by the DOE, if possible, by October 27, 2007 which is 26 days after NRC's initial deadline and possibly a month before the newly extended deadline, for the filing of contentions. The reason for this delay is that the documents must first be reviewed for proprietary

information by EPRI, and if necessary partially redacted before being made available. Including a copy of the letter from the DOE, Sherwood Martinelli, Vice President of FUSE USA, formally requested that NRC grant an extension of time to file a Formal Request for a Hearing and Petition to Intervene (with contentions). The request for an extension of time to file asked for 60 days from the date the DOE fulfils its commitments under the Federal FOIA guidelines. See Exhibit DD. No official action has been taken on the part of the NRC in even acknowledging Stakeholders' specific request.

(iv) It is a reasonable expectation and contention that the citizens and Stakeholders have fair and adequate access to records and documents that are being used in presenting and justifying the important issues found in the Applicant's LRA for IP2 LLC and IP3 LLC. Until such time as Stakeholders are given adequate access to all relevant documents necessary to perform a full and complete review of the LRA, Stakeholders are being unfairly barred from being able to adequately formulate, create and support viable contentions on issues that directly affect public health and safety.

2. The Contention is Within Scope in the License Renewal Process for Entergy's LRA for IP2 LLC and IP3 LLC

Safety analysis and aging management go to the core of any LRA submitted to the NRC. The ability of Stakeholders to investigate and understand the reliability and quality of the Applicant's Safety analysis

assumptions/claims, and evaluate the reliability of the Applicant's proposed aging management plans for the 20 year period of additional operation are crucial for adequate public involvement in the License Renewal Application Process, and should not be mitigated or minimized in the name of expediting the process, or in the name of the NRC calendar. The current licenses for IP2 and IP3 do not expire until 2013 and 2015 respectively, which means granting an extension of time to file formal requests for a hearing and petitions to intervene (with contentions) until all relevant documents are made publicly available, would not negatively impact either the NRC or their licensee in any meaningful fashion. Conversely, denying a reasonable request for an extension of time to file that would allow the Stakeholders an adequate chance to resolve issues surrounding industry and the Applicant's claims to proprietary privilege will cause irreversible harm to the Stakeholders and the Stakeholders' community.

A community and its citizens' right to be involved in the licensing process is not only in scope, but codified into the 10 CFR rules and regulations that govern the re-licensing process. Further, Stakeholder rights to redress are protected and preserved under the First Amendment of the Bill of Rights, and cannot be marginalized in the name of the Applicant or for the convenience of the NRC.

3. Contention Raises Both Material Issues of Fact and Law

The Constitution and the Bill of Rights ascertain fairness of any rules or regulations promulgated under the authority granted an agency such as the NRC, by the Congress of the United States of America. Specifically, we must look at the First Amendment which states:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

NRC's authority to promulgate and enforce rules and regulations stems by proxy from a direct act of the Congress of the United States of America. Since the Constitution and Bill of Rights preclude Congress from making laws which abridge the people's right to peaceably petition the government for redress of grievances, the NRC that was created by Congress cannot legally exist, create, draft or enforce any rule or regulation that de facto abridges the people's right to a adequate redress of grievances.

The very nature of the NRC's relicensing rules and regulations as codified in 10 CFR, specifically as they relate to what is and is not within scope, what the NRC allows the Applicant to claim as proprietary, and the limited time allotted for citizens to adequately address and submit their

contentions de facto abridges the people's right to petition the government for a redress of grievances.

There are numerous laws drafted by Congress which show their intent to preserve the individual rights of citizens at all costs against unfair, unjust and illegal ordinances and regulations.

See 42 U.S.C. § 1983 it is, in relevant part, as follows:

Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State . . . subjects, or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress.

In invoking § 1979 as revised in 42 U.S.C. § 1983 Stakeholders contend that their protection of "rights, privileges, or immunities secured by the Constitution" encompasses what "due process of law" and "the equal protection of the laws" of the First Amendment guarantee against action by the NRC. The withholding by the Applicant of "proprietary documents", such as the leak report and leak plume maps, during the limited time in which the public is permitted to file Formal Request for Hearing, and Petition to Intervene with contentions, deprives and denies Stakeholders their Constitutional rights, and is unduly prejudiced in favor of the Applicant. It is

a blatant attempt by Entergy, NEI and the NRC to deprive Stakeholders of or marginalize the Stakeholders rights and privileges secured by the Constitution.

The NRC, in their method of conducting a License Renewal Process, has deliberately designed it with the assistance of the Nuclear Energy Institute (NEI), the powerful nuclear industry lobbying group, to eliminate any meaningful citizen involvement, and has intended to thwart all chance of real redress, as is guaranteed by the Constitution and Bill of Rights.

Moreover, the Applicant's hiding of crucial documents behind the veil of Proprietary Privilege, and the NRC's granting of privilege without question so that Stakeholders might deal with the legal roadblocks presented by the Applicant's claim of Proprietary Privilege are the very acts that 42 U.S.C. § 1983 was meant to protect against.

The Applicant has deliberately and knowingly caused another person (NRC Staff) to hide and/or withhold documents from and official proceeding (License Renewal Application Process). The Applicant's wrongful and abusive claim to and use of Proprietary Privilege is targeted at thwarting adequate participation by Stakeholders in the official proceeding of the License Renewal Application process, and official proceeding of the Nuclear Regulatory Commission, an agency of the government of the United States of America. NRC's blind granting of said privilege without question of its

licensee's entitlement to same makes both parties guilty of an attempt to withhold and/or alter documents meant for use in an official proceeding, and prejudices the LRA proceedings in favor of the Applicant:

18 U. S. C. §§1512(b)(2)(A) and (B) makes it a serious crime to "knowingly ... corruptly persuade another person ... with intent to ... cause" that person to "withhold" documents from, or "alter" documents for use in, an "official proceeding."

Further, the NRC has to weigh a licensee's claim of Proprietary Privilege against the public's need to know. It is imperative in making a decision to grant a request for Proprietary Privilege against the right of the public to be fully apprised of the bases for, and the potential effects, risks and health concerns associated with the proposed action .

(i) § 2.390 *Public inspections, exemptions, requests for withholding*

See subsection B (5) (6)

(5) If the Commission determines, under paragraph (b)(4) of this section, that the record or document contains trade secrets or privileged or confidential commercial or financial information, the Commission will then determine whether the right of the public to be fully apprised as to the bases for and effects of the proposed action outweighs the demonstrated concern for protection of a competitive position, and whether the information should be withheld from public disclosure under this paragraph. If the record or document for which withholding is sought is deemed by the Commission to be irrelevant or unnecessary to the performance of its functions, it will be returned to the applicant.

(6) Withholding from public inspection does not affect the right, if any, of persons properly and directly concerned to inspect the document. Either before a decision of the Commission on the matter of whether the information should be made publicly available or after a decision has been made that the information should be withheld from public disclosure, the Commission may require information claimed to be a trade secret or privileged or confidential commercial or financial information to be subject to inspection under a protective agreement by contractor personnel or government officials other than NRC officials, by the presiding officer in a proceeding, and under protective order by the parties to a proceeding. In camera sessions of hearings may be held when the information sought to be withheld is produced or offered in evidence. If the Commission subsequently determines that the information should be disclosed, the information and the transcript of such in camera session will be made publicly available.

From the onslaught of the Applicant's LRA process for IP2 LLC, the NRC failed in their fiduciary duties and responsibilities to members of the public when it comes to the Applicant's claims of Proprietary Privilege. Instead of making a decision based on the public's need to know weighed against Entergy's desire to hold a competitive edge in the nuclear industry, the NRC staff, as a matter of practice, simply grants all requests by the Applicant for Proprietary Privilege. NRC's in-house protocols, in this regard, fly in the face of its own regulations, and have placed members of the public at a grave disadvantage by interfering with the Stakeholders' rights to redress

in this case, and by interfering with Stakeholders' ability to file properly supported contentions.

The Stakeholders of the host community are being told by both Applicant and NRC to simply trust them. Past review of Indian Point, and the regulatory problems associated with the site, show there is reason not to trust either the licensees or the NRC. As President Ronald Reagan said, "trust but verify." Stakeholders cannot verify, cannot ascertain the accuracy of the Applicant's Safety Analysis, nor can Stakeholders accept the Applicant's proposed aging management analysis without a full review of the application and its underlying documents. Further, and germane to this contention, Stakeholders cannot adequately and timely prepare properly prepared and researched contentions without unfettered access to the full record in this case.

It is clear, that in the case of the Applicant's LRA for two aging reactors with known Flow Accelerated Corrosion (FAC) issues, known fatigue issues, known cross-cutting issues, and a host of other safety and equipment failures that the public's right and need to know should outweigh Entergy's need for secrecy, should outweigh the NRC's desire to keep to a tight time schedule in the relicensing process.

4. Contention is Supported By Facts and/or Expert Opinion

Intervener has met the minimal requirements of the 10 CFR rules and regulations in presenting this contention in a concise statement of the facts adequate to establish that said contention is entitled to a further and complete review of the issues contained herein. It is pointed out that the rules governing the license renewal process and hearings lay out some basic criteria that a stakeholder must meet to have a contention accepted for further review.

Section 2.309(f)(v) requires,

...a concise statement of the alleged facts or expert opinion which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue.

The contention as written clearly presents a concise statement of the alleged facts and matters of law. Without first resolving the matters surrounding production of documents, without first reaching agreement on what documents are or are not entitled to Proprietary Privilege, it is impossible for interveners to adequately review Entergy's LRA in a meaningful fashion and submit our contentions in a timely fashion.

The right to add additional supporting documents, and name industry expert witnesses and the scope of their testimony is fully reserved herein. Additionally, it is pointed out that the rules and regulations dealing with hearings and contentions accepted therein goes further to define specifically

the minimum burden of proof necessary to have a contention accepted for further review and scrutiny:

An Intervener is not required to prove its case at the contention filing stage: "the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality as that is necessary to withstand a summary disposition motion." Statement of Policy on Conduct of Adjudicatory Proceedings, 48 N.R.C. 18, 22 n.1 (1998), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989). Rather, petitioner must make "a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate." In Gulf States Utilities Co., 40 NRC 43, 51 (1994), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989).

It is clear here, that this contention more than meets the minimal standards necessary for acceptance of this contention. The petitioner in this case has made "a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate."

(i) Contention Raises a Material Matter of Fact or Law

The adequacy of a 60 day time period from the date of acceptance of Entergy's LRA as witnessed by notice of same in the Federal Registry is by fact subjective, and up to interpretation. The effect that the Applicant's claim of Proprietary Privilege has on the Stakeholder community's ability to disseminate and understand the LRA and submit properly supported

contentions in a timely fashion is also a subjective issue of fact that should be decided by an impartial board or in a court of law. The Applicant's entitlement to its claim of Proprietary Privilege is, or should be subjective in scope. The constraints and limitations the NRC's time constraints have placed on our community's right to redress and limited by the Applicant's claim to relevant documents as "proprietary" is a matter of law in dispute, and should also be resolved by a board or in a court of law.

E. Contention 11: Regulatory Guidance contained in 10 CFR50.4 and Rule Implementing Standards under the American Rules and Procedures Act require Stakeholders to have reasonable opportunity to bring forth issues beyond the narrow scope where members of the public have specific and direct substantiated concerns

Issue Statement: Stakeholders assert that 10 CFR50.4 and Rule Implementing Standards under the American Rules and Procedures Act, require Stakeholders to have reasonable opportunity to bring forth issues beyond the narrow scope so that members of the public can raise specific and directly substantiated concerns, including but not limited to, an Independent Safety Assessment.

Regulatory Guidance contained in 10 CFR50.4 and Rule Implementing Standards under the American Rules and Procedures Act require Stakeholders to have reasonable opportunity to bring forth issues beyond the narrow scope where members of the public have specific and directly substantiated

concerns. The Stakeholders and elected officials (including, Senator Hillary Clinton, Governor Eliot Spitzer, Congresswoman Nita Lowey, Congressman John Hall, Congressman Eliot Engel, Congressman Maurice Hinchey, as well as Westchester, Rockland, Putnam and Dutchess Counties Executive and Legislators, and the municipalities of Village of Croton-on the Hudson, City of Beacon, Village of Ossining, Town of Cortlandt, Town of Ramapo, Town of Stony Point, and Town of Putnam Valley) call for an Independent Safety Assessment (ISA) of Indian Point systems, components and programs beyond the narrow recommendations of existing regulatory guidance. NRC's denial of this Independent Safety Assessment and the NRC's current mode of oversight increasingly reduces accountability and transparency. Stakeholders assert that these issues must be fully addressed and resolved prior to final license renewal. These areas of scope include 4.16 KV electrical distribution system, Control Ventilation, containment ventilation, and many more issues. (See exhibit AA)

F. Contention 12: The LRA, in which Indian Point 2 LLC seeks a new superseding license to replace the existing license, is incomplete and should be dismissed, because instead of presenting required Time Limiting Aging Analysis and an Adequate Aging Management Plan, it seeks to agree to uncertain commitments with regard to the Aging Management of the plant at an uncertain date in the future, thereby causing the license agreement to be voidable.

The Stakeholder's contend that the Applicant has submitted an LRA that contains uncertain and undefined commitments with regard to its Aging Management Plan, and therefore cannot be approved by the NRC because it is non-binding and is merely an intention to "agree to agree" to a plan that will be defined sometime in the future. Instead of presenting specific plans required for Time Limiting Aging Analysis (TLAA) and adequate aging management plans to deal with known plant degradation issues, the proposed LRA merely provides commitments in the licensing review process to conduct certain Time Limiting Aging Analysis (TLAA), and implement as yet unknown Aging Management Plans at some future date and time. The NRC's job is to identify shortcomings in the application and identify unaddressed issues in the application, not to negotiate with the Applicant in the review process for a list of future non-descript commitments. A TLAA either was done to address a known aging issue, or it was not. An aging management plan either exists, or it does not. If it does not exist, if the analysis has not been done, the application is incomplete. A future commitment to complete a TLAA amounts to nothing more than an agreement to agree to an analysis that has not yet been completed, and therefore an Aging Management plan cannot be developed and/or committed to, until an uncertain date in the future, thereby making the terms of the license vague, non-specific and unenforceable.

NRC's 10 CFR 54 in part requires a licensee to A) conduct a Time Limiting Aging Analysis (TLAA) for primary equipment and components subject to fatigue that are determined to be in scope, and B) require as a part of the license renewal application that adequate Aging Management Plans be included in the application to deal with any parts, components, and systems that are subject to aging issues such as fatigue that are within scope.

Said regulations deliberately do not provide a mechanism for a plan to be submitted at some later date. Moreover, allowing such a future commitment not only bars public Stakeholder involvement in the process, thereby removing the review of said aging management plans from public scrutiny, it also violates the intent of the regulations, if not the regulation itself. The LRA is supposed to be complete, and address **all issues** involved in licensee being granted a new superseding license. Making a commitment to address the issues of an Aging Management Plan later on is not the intent of the law. Agree to agree is not law.

Further, the NRC is now realizing that many previous licensees who have moved through the re-licensing process are finding it impossible to meet the deadlines set for those future commitments. Even more disturbing is that the NRC is discussing the possibility of granting these licensees relief from

those very commitments, in a classic example of “out of sight out of mind.” This process needs to be transparent, and the NRC needs to act as a regulator who abides by and enforces its rules and regulations, rather than acting as an arbiter and deal maker. The License Renewal Process is a serious and regimented process, not "Let's Make A Deal".

The NRC has, in past LRA proceedings allowed the Applicant to make a future commitment to A) perform an assessment of this known fatigue issue, and B) make a future commitment on the part of the Applicant to devise an acceptable aging management program for this known issue at some later date after the license renewal application has been approved.

The thousands of letters of relief from NRC rules, and licensee commitments show that this is not acceptable. As an example, it is pointed out that Indian Point 2 made a commitment when first licensed back in the early 70's to design and build a **closed cooling system**. Some 30 plus years later, Entergy is still rationalizing the missed commitment that originally had a 1979 date of delivery.

The Stakeholders in the current LRA proceeding regarding IP2 contend this method is unacceptable and makes the license unenforceable. The 10 CFR rules are very specific and include the language without ambiguity that “licensees are to have an aging management plan in place for

review”. Agreeing to keep an eye on things while you invent/create an aging managing plan does not meet the regulations as they now are written and exist. Agreement to agree is not legally enforceable under basic contract law.

In the current LRA proceeding and approval process the Applicant makes a commitment to the NRC to vaguely do something left basically undefined at some uncertain future date and time after a new superceding license has already been issued. This amounts to nothing more than an agreement to agree later on a process that remains, at best, vaguely defined.

In order to be a valid and enforceable agreement, a document must contain certain essential legal provisions and must not leave either undecided or to be determined at some time in the future any aspect of such essential legal provisions. If these essential elements are not present, then the document is not a binding one and is often referred to by courts as an “agreement to agree” and is nothing more than a letter of intent, both of which are not enforceable as contracts or license. A license is essentially a contract between a regulator and a regulated business, in this case the NRC and IP2 LLC.

In *Richie Co. LLP vs. Lyndon Insurance Group, Inc.*, a federal case out of the Eighth Circuit interpreting Minnesota law, the Court held that the April

16, 1999 “agreement” was not an agreement at all but a non-binding letter of intent and agreement to agree. The Court stated: A letter creating an agreement to negotiate in good faith in the future is not enforceable where the parties have contemplated that the agreement is not the complete and final agreement governing the transaction at issue.

The Court also stated: Furthermore, where the parties have agreed that an “agreement to negotiate” or letter of intent, in its entirety, is not a binding legal agreement, Courts have refused to enforce an individual provision of the letter as a freestanding “contract” promise. Therefore since the NRC plans to accept vague commitments with unspecified protocols to be determined at an uncertain date in the future, for certain components and systems in IP2's aging management plan, then the entire plan and new superseding license will be unenforceable and void.

The Court stated further: That language that spoke of future actions and agreements contemplated but not yet completed by the parties showed that the letter “was not the complete and final agreement the parties contemplated would govern” but “merely created an agreement to negotiate in good faith.” Such language clearly manifests an intention to do something essential at a later date, thus the document is not a binding contract but merely an unenforceable agreement to agree and a non-binding letter of intent. A

nuclear reactor applicant must not be allowed to operate a facility without a complete and fully enforceable legal license with specific terms of the license in place.

If the NRC approves a new superseding license based on the Applicant's LRA that contains criteria and obligations of the Applicant that do not have sufficient certainty with regard to the aging management plan, then such License will be void for uncertainty. The new superseding license will be nothing more than an "agreement to agree", as to essential terms and conditions, that may adversely affect public health and safety left vague and uncertain, to be defined at an uncertain date and time.

In addition the NRC's acceptance of the Applicant's proposed LRA with uncertain and vague criteria, will bar Stakeholders from participating in the review of specific criteria that may adversely affect public health and safety, which is a violation of Stakeholders right to both due process and full redress under the law.

Therefore the Stakeholders contend that the NRC cannot approve the LRA with any vague or uncertain criteria, with unenforceable future commitments which would cause the new superseding license to be unenforceable and void.

G. Contention 13: The LRA submitted fails to include Final License Renewal Interim Staff Guidance. For example, LR-ISG 2006-03, “Staff guidance for preparing Severe Accident Mitigation Alternatives.”

The LRA submitted fails to include Final License Renewal Interim Staff Guidance (LR-ISG) For example, LR-ISG 2006-03, “Staff guidance for preparing Severe Accident Mitigation Alternatives (SAMA).” This License Renewal Interim Staff Guidance recommends that applicants for license renewal use the Guidance Document Nuclear Energy Institute 05-01, Revision A, (ADAMS Accession No. ML060530203) when preparing SAMA analyses. The Applicant failed to include any Interim Staff Guidance in its submittal in spite of the recommendation of the NRC, and in spite of the regulator incorporating License Renewal Interim Staff Guidance in the next revision of Supplement 1 to Regulatory Guide 4.2, “Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses.” Here the Applicant failed to address not just the rule but failed to address the trade guidance documents as well. (see Exhibit BB)

H. Contention 14: The Updated Final Safety Analysis Report (UFSAR) fails to meet the requirements of 10 C.F.R.55(a) by deletion of required codes and standards, and obviates the ability for a petitioner to perform a technical review as required under 10 CFR 50.4.

Statement of Issue: The Stakeholders assert that The Updated Final Safety Analysis Report (UFSAR) as referenced in the LRA for Unit 2 fails to meet the minimum requirements of 10 CFR 55(a), and fails to include codes and standards required to be contained in the UFSAR. This fundamental and cornerstone document was altered between the years 2000, and 2006 to remove essentially all codes and standards and therefore is prima facie in violation of federal rules. Without the Safety Analysis Report including necessary codes and standards the license to operate the facility has no basis to ensure the safe operation and protection of the health and safety of the public.

The Updated Final Safety Analysis Report (UFSAR) as referenced in the LRA for Unit 2 fails to meet the minimum requirements of 10 CFR 55(a), and fails to include codes and standards required to be contained in the UFSAR. This fundamental and cornerstone document was apparently altered between the years 2000, and 2006 to remove essentially all codes and standards and therefore is prima facie in violation of federal rules. Without the Safety Analysis Report including necessary codes and standards the license to operate the facility has no basis to ensure the safe operation and protection of the health and safety of the public.

I. Contention 15: The Applicant does not have in its possession the Current License Basis (CLB) for Indian Point 2, that is required for license renewal under CFR 2.390

Statement of the issue: FUSE asserts that the Current License Basis for Indian Point 2 is unknown and unavailable, thereby preventing the right of Stakeholders the right to review and analyze plant specific commitments and modifications.

The Applicant is required to have in its possession and control the precise current license basis for each unit. The current license basis (CLB) is defined in 10CFR50.3. The Current License Basis (CLB) is required for Renewal as required for license renewal³ under the CFR 2.390. is unavailable.

Numerous attempts have been made by the NRC as well as the GAO to determine whether the Current License Basis is known, current, documented, and available. None have been successful. The most recent was an investigation by the GAO (See exhibit X), where it was concluded that the CLB for each plant is *not known*. This is particularly material, given that the

³ Of note is that very recently numerous examples of non existent CLB were requested and denied, the licensee or the regulatory agency have begun to address parts of this issue, for example, the General Design Criteria were made available after numerous requests but only recently. The same for the SERs and FSARs (but on heavily redacted form). The CLB by rule under CFR54.3 is plainly interpreted that the pertinent parts must be available at the beginning of the public review period, and not two weeks before the end of the 60 day review window. See exhibit xxx for detailed correspondence history regarding some of these documents, letters, rejections, and emails. Even with the extension granted under FUSE request for an additional 60 days, this issue still stands.

pertinent parts of the CLB are required under §2.309 to be available to Stakeholders regarding the license renewal of the plant.

The CLB includes the Design Basis Document Program. For IP3 this is referred to as the Design Basis Verification Program, for Indian Point 2, this is referred to as the Design Basis Document Program. The status of design basis program is outdated, and is not reliable as design basis documents. See for example the IP2, IP3 DVP document regarding Appendix R and Fire Protection. These documents are part of the licensing basis and must have current and relevant portions available to interested parties.

The time clock for submission of a Formal Request for Hearing, and Petition to Intervene should not begin until Stakeholders have access to a full and complete set of un-redacted versions of the LRA and its underlying documents, including but not limited to the FSAR's (all versions), USFAR's (all versions), the most current and up to date company and/or NRC version of the Current Licensing Basis (CLB) which is described in 10 CFR 54.3 as:

Current licensing basis (CLB) is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant specific design-

basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

FUSE takes the position that any referenced documents associated with the above is also part of the licensing basis are incorporated by reference into the LRA. Further, it is at the Stakeholder's discretion to determine which of those references are pertinent to performing an adequate technical review of the LRA submitted by the Applicant.

Therefore the NRC must deny the Applicants LRA because the Current License Basis (CLB) required for license renewal under 10CFR2.336 is unavailable and unknown.

J. Contention 16: The Applicant's claims of entitlement to Proprietary Information, and the NRC's granting of their request for same have forestalled petitioners capability of properly forming and supporting certain contentions we wish to raise in the 60 day limited window of opportunity being given by the NRC.

Statement of Issue: Stakeholder's content that despite the notice of extension of September 18 granting a partial extension of the deadline to November 30, 2007, the NRC has not responded specifically and directly to

FUSE Vice President Sherwood Martinelli's request for and extension of time to file asked for 60 days from the date the DOE fulfils its commitments under the Federal FOIA guidelines to provide requested documents on or about October 27, 2007.

An example of the problems created by Applicants' claim of the information being proprietary in nature can be found in a cursory review of the most recent UFSAR's for IP2 LLC and IP3 LLC. Applicant in their LRA refer to the safety analysis in these documents in justifying many aspects of the aging management program (or lack there of) that will be relied upon in the 20 year period of operation should their LRA be granted. The redacted and publicly available versions of the USFAR's for IP2 and IP3 have over 80 percent of Chapter 14 which is the Safety Analysis has been redacted. If Stakeholders cannot review Applicant's 's safety analysis, we cannot formulate opinions in the absence of facts as to the adequacy of their proposed aging management plan as outlined in the LRA.

Further examples revolve around industry documents that Applicant relies upon in the formulation of their aging management plans (and defense of same) that are not available for review under the same proprietary claims. We know for instance that there are issues regarding Boraflex degradation or actual failure in the spent fuel pools which brings into question the reliability

and workability of Applicant's aging management plan for the spent fuel pools at IP2 (and unit1 and IP3). An industry investigation into this issue, and the EPRI report on the findings is not publicly available, and is classified as proprietary in nature, even though tax payer funds (provided by DOE) were used in the creation of said work product. A challenge to this proprietary claim could take months, even years to resolve.

One FOIA filed with the DOE has been fulfilled in part, with additional document delivery promised by the DOE, if possible, by October 27, 2007 which is 26 days after NRC's deadline for the filing of contentions. The reason for this delay, is that the documents must first be reviewed for proprietary information, and if necessary partially redacted before being made available. Including a copy of the letter from the DOE, Sherwood Martinelli, Vice President of FUSE USA, formally requested that NRC grant and extension of time to file a Formal Request for a Hearing and Petition to Intervene (with contentions). The request for an extension of time to file asked for 60 days from the date the DOE fulfils its commitments under the Federal FOIA guidelines. As of September 18 official notice was provided to FUSE at extensive discussions with FUSE, and the extension was granted in part by extending the deadline to November 30, 2007. It remains a legal issue whether the review period should begin when all the document pertinent

review become available under CFR 2.309 after availability. We therefore consider the contention open, and request that it admitted by the Board regardless of the extension FUSE was successful in obtaining.

K. Contention 17: Safety/Aging Management: Applicant's LRA for Indian Point 2 is insufficient in managing the environmental equipment qualification required by federal rules mandated after Three Mile Island that are required to mitigate numerous design basis accidents to avoid a reactor core melt and to protect the health and safety of the public .

Issue Statement: Stakeholder's contend that Applicant's LRA for Indian Point 2 is insufficient in managing the equipment qualification required by federal rules mandated after Three Mile Island that require the Applicant to mitigate numerous design basis accidents established to avoid a reactor core meltdown and to protect the health and safety of the public, because the proposed LRA is not sufficient to demonstrate compliance with either 10 CFR50.49(e)(5) or 10 CFR54.

Summary of Contention

Indian Point 2's LRA does not adequately address the license renewal requirements of 10CFR54 specifically under 10CFR50.54.4, Scope, for those components required for renewal defined in 10 CFR §50.49(b)(1). Indian Point claims credit in their LRA under Table 3.6.1, and EQ analysis in section 4.4 out of compliance with the Rule:

(i) “EQ equipment is not subject to aging management review because replacement is based on qualified life. EQ analyses are evaluated as TLAAAs in Section 4.4.

(ii) The Non-EQ Insulated Cables And Connections Program will manage the effects of aging. This program includes inspection of non-EQ electrical and I&C penetration cables and connections.

(iii) The Non-EQ Instrumentation Circuits Test Review Program will manage the effects of aging. This program includes review of calibration and surveillance testing results of instrumentation circuits”

The proposed programs are not sufficient to demonstrate compliance with either 10 CFR 50.49(e)(5) or with 10 CFR 54.

Essentially, Entergy under the approval of the NRC, but with objection of the Advisory Committee on Reactor Safeguards (ACRS), found alternative analysis that performed a rudimentary economic analysis to disregard federal rules regarding Entergy’s current license basis (CLB) with respect to equipment required to operate during a design basis accident. A rudimentary quality study procured by the NRC concluded that a 50 % chance of multiple equipment not functioning was acceptable. based upon an economic analysis.

This flagrant abuse of federal rules, and non-compliance with the Federal Administrative Procedures Act might be compared to a school district deciding to remove all the fire extinguishers in a school district because the chances of a fire are low, and the cost of keeping them in operating condition is high, regardless of a law mandating public schools with 100s of students in attendance to have the extinguishers present, operable and inspected at prescribed times. To illustrate, a high school administrator questioned the need for fire extinguishers because of costs and historical absence of fires, and literally not one extinguisher used. Even though the administration knew that the law required extinguishers to be placed, and maintained, it acted negligently by knowingly keeping some brands that may not properly function or simply fail. So instead of fulfilling the legal requirement of having working extinguishers, the school administration deliberately set aside the requirement in lieu of an alternative probabilistic risk analysis (PRA) study – to save money. The fire extinguishers were quietly thrown out as each one broke etc. At Indian Point 2, the Applicant and NRC concluded that the economic analysis to justify a 50% failure rate was acceptable.

1. Applicable Federal rules pertaining to this contention

- (i) Under §54.19 of requirements for license renewal, Applicant must provide the information specified in 10CFR50.33(a) through (e), (h)

and (i)...or by reference to other documents that are required for this section. Under §54.21, Contents of the application—technical information, each application must contain the following information:

(A) *An integrated plant assessment (IPA).*

(1) For those systems, structures, and components within the scope of this part, as delineated in §54.4, identify and list those structures and components subject to an aging management review. Structures and components subject to an aging management review shall encompass those structures and components:

a. That perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties. These structures and components include, but are not limited to, the reactor vessel, the reactor coolant system pressure boundary, steam generators, the pressurizer, piping, pump casings, valve bodies, the core shroud, component supports, pressure retaining boundaries, heat exchangers, ventilation ducts, the containment, the containment liner, electrical and mechanical penetrations, equipment hatches, seismic Category I structures, electrical cables and connections, cable trays, and electrical cabinets, excluding, but not limited to, pumps (except casing), valves (except body), motors, diesel generators, air

compressors, snubbers, the control rod drive, ventilation dampers, pressure transmitters, pressure indicators, water level indicators, switchgears, cooling fans, transistors, batteries, breakers, relays, switches, power inverters, circuit boards, battery chargers, and power supplies; and

b. That are not subject to replacement based on a qualified life or specified time period.

(2) Describe and justify the methods used in paragraph (a)(1) of this section.

(3) For each structure and component identified in paragraph (1)(i) of this section, demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.

(B) *CLB changes during NRC review of the application.*

Each year following submittal of the license renewal application and at least 3 months before scheduled completion of the NRC review, an amendment to the renewal application must be submitted that identifies any change to the CLB of the facility that materially affects the contents of the license renewal application, including the FSAR supplement.

(C) *An evaluation of time-limited aging analyses.*

(1) A list of time-limited aging analyses, as defined in § 54.3, must be provided. The applicant shall demonstrate that—

- a. The analyses remain valid for the period of extended operation;
- b. The analyses have been projected to the end of the period of extended operation; or
- c. The effects of aging on the intended function(s) will be adequately managed for the period of extended operation.

(2) A list of plant-specific exemptions granted pursuant to 10 CFR 50.12 and in effect that are based on time-limited aging analyses as defined in § 54.3. The applicant shall provide an evaluation that justifies the continuation of these exemptions for the period of extended operation.

(D) *An FSAR supplement.* The FSAR supplement for the facility must contain a summary description of the programs and activities for managing the effects of aging and the evaluation of time-limited aging analyses for the period of extended operation determined by paragraphs (a) and (c) of this section, respectively.

a) Under License Renewal Rule 10 CFR 54, Entergy must specify components that are within the scope and in particular those that are defined under the requirements of 10 CFR 50.49. 10 CFR § 54.4 Scope specifies that plant systems, structures, and components within the scope of the License Renewal Rule are: Safety-related systems, structures, *and components* which

are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions:

b) Plant systems, structures, and components within the scope of this part are Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions:

- a. The integrity of the reactor coolant pressure boundary;
- b. The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- c. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.
- d. All non-safety related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section..
- e. All systems, structures, and components relied on in safety analysis or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).
- f. The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the basis for including them within the scope of license renewal as specified in paragraphs (a)(1) - (3) of this

section.[60 FR 22491, May 8, 1995, as amended at 61 FR 65175, Dec. 11, 1996; 64 FR 72002, Dec. 23, 1999].

2. Analysis of the of Indian Point 2 LRA Against the Rule

(i) The Indian Point application for Unit 2 for License renewal, as it applies to Equipment Qualification Program MUST consider the following requirements of 10CFR 50.49:

(A) Accomplishing the safety function by some designated alternative equipment if the principal equipment has not been demonstrated to be fully qualified.

(B) The validity of partial test data in support of the original qualification.

(C) Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified.

(D) Completion of the safety function prior to exposure to the accident environment resulting from a design basis event and ensuring that the subsequent failure of the equipment does not degrade any safety function or mislead the operator.

(E) No significant degradation of any safety function or misleading information to the operator as a result of failure of equipment under the accident environment resulting from a design basis event.

(ii) **Issues regarding 10 CFR 50.49 were identified under a Generic Safety Issue number 168.**

Issues regarding 10 CFR 50.49 were subsequently investigated by numerous parties. Many components were found unqualified to function for the 40 years let alone 60 years. These components are presently installed at

Indian Point 2 and 3. See exhibit FF Certain components and failures were found as high as 50%. *Id.*

(iii) The Advisory Committee for Regulatory Safeguards (ACRS) reviewed the results of GSI 168 and ACRS Comments on GSI 168, and then made a number of recommendations⁴

A discussion of the treatment of the instrumentation and control (I&C) cables during the license renewal term be included in the generic communication recommended by RIS 2003-09 see exhibit V. The staff encouraged the industry to perform further developmental work on techniques for monitoring Instrumentation &Control (I&C cable) condition. The staff concluded that the current equipment qualification (EQ) process for low-voltage Instrumentation &Control (I&C) cables is adequate for the duration of the current license term of 40 years. Knowledge of the conservatism in the operating environment, as compared to the qualification environment, coupled with observation of the condition of the cables can be used to extend the qualified life of the cables. A combination of condition monitoring techniques is needed since no single technique is effective to detect degradation of Instrumentation &Control (I&C) cables. Test results and other pertinent information should be disseminated to the nuclear industry through a generic communication.

⁴ ACRS letter dated June 17, 2002

(iv) Additional Comments by Advisory Committee for Regulatory Safeguards (ACRS) Members Dana A. Powers, F. Peter Ford, Victor H. Ransom, Stephen L. Rosen, and John D. Sieber include the following:

The staff has recommended a resolution of cable integrity issues for one class of design-basis accidents, loss-of-coolant accidents. For these accidents, temperature and radiation loads are of dominant concern. Other design-basis accidents, such as main steam-line breaks, can impose other loads on cables such as large amplitude vibrations and bending. The staff has not investigated the effects of these other loads on the integrity of aged cables adequately. What the staff has done is adequate to resolve the six, open, sub-issues of GSI-168. The staff should consider additional examinations of cable integrity as part of its ongoing work on mechanical loads and vibrations associated with main steam-line breaks and other design-basis accidents.

MR. AGGARWAL: Thank you.

As we reported to you previously, there were failures of certain I&C cables in NRC tests, namely in LOCA test numbers 4, 5, and 6. Failures of single conductor bonded Okonite cables. Sampled more cables in test number 4, and eight out of 12 cables failed in LOCA test number 6 for 60 years. We also found in our research that there is no single condition monitoring technique available which is effective to detect degradation. Probably combination of different techniques can be used, depending upon the type of insulation. We also found that visual inspection can be useful in assessing the degradation of cable with time. (Pg. 224-225)

MR. AGGARWAL: Thank you.

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numbers 4, 5, and 6. Failures of single conductor bonded Okonite cables. Sampled more cables in test number 4, and eight out of 12 cables failed in LOCA test number 6 for 60 years. We also found in our research that there is no single condition monitoring technique available which is effective to detect degradation. Probably combination of different techniques can be used, depending upon the type of insulation. We also found that visual inspection can be useful in assessing the degradation of cable with time. (Pg. 224-225)

Turning to the 60-year aging assessment, which was LOCA test number 6, in our test, eight out of 12 cables failed the post-LOCA test. And we have concluded that some of these cables may not have sufficient margin beyond the 40 years of the qualified life. (Pg . 233-234)

(v) Brookhaven Testing, 4.5.4 Extending Qualified Life (exhibit FF)

The data obtained from test sequence 6 are of particular interest for the issues related to extending qualified life. In that test, cables from four different manufacturers were pre-aged to the equivalent of 60 years of qualified life and were then exposed to simulated LOCA conditions. As discussed in Section 3.6, a number of the specimens experienced degradation related failures during a submerged voltage withstand test in which they were unable to hold the test voltage. These results indicate that the degradation due to aging beyond the qualified life of the cables may be too severe for the insulation material to withstand and still be able to perform during an accident. For life

extension purposes, the qualified life of the cables should be reviewed and compared to actual plant service environments. A determination can then be made as to whether the additional exposure to aging stressors during the period of extended operation will be acceptable for the cable materials.

- (vi) Under RIS 2003-09, The NRC accepted the Advisory Committee for Regulatory Safeguards (ACRS) in part, and set aside significant technical concerns in other parts. This is a clear violation. Five members dissented in accepting the study closing GSI.**

The staff has concluded that, although a single reliable condition-monitoring technique does not currently exist, walk downs to look for any visible signs of anomalies attributable to cable aging, coupled with monitoring of operating environments, have proven to be effective and useful.

A combination of condition-monitoring techniques may be needed since no single technique is currently demonstrated to be adequate to detect and locate degradation of Instrumentation & Control (I&C cables). Monitoring Instrumentation & Control (I&C) cable condition could provide the basis for extending cable life.

The apparent violation of the Administrative Procedures Act because of the NRC's bypassing of ACRS recommendations regarding compliance to 10CFR50.49, and the implications to 10CFR50.4.

(vii) Regulatory Issue Summary (RIS 2003-09)

The staff has concluded that, although a single reliable condition-monitoring technique does not currently exist, walk downs to look for any visible signs of anomalies attributable to cable aging, coupled with monitoring of operating environments, have proven to be effective and useful. A combination of condition-monitoring techniques may be needed since no single technique is currently demonstrated to be adequate to detect and locate degradation of Instrumentation & Control (I&C) cables. Monitoring Instrumentation & Control (I&C) cable condition could provide the basis for extending cable life.

Expert Witness testimony

See Declaration by Expert Witness Ulrich Witte, regarding his work with Equipment qualification and Arrhenius aging as was implemented in the 1980s, then questioned regarding license renewal. See exhibit GG

2. Conclusion

The NRC violated Title 5, Part I, Chapter 7 of the Federal Administrative Procedures Act—and that the problem has particular relevance to Indian Point 2 license renewal as well as IP2's present ability to cope with certain design basis accidents.

Particularly in 10CFR50.49.

The following are multiple component examples required for safe shutdown of the IP2 –which are presently unqualified and will apparently remain unqualified from Entergy statements in their LRA. FUSE argues (1) the violations made by Entergy in failing to comply with the 10CFR50.49 (2) the violations made by the regulatory agency, the NRC, in accepting the unqualified components as okay, even with a flawed approval based upon industry guidance, that actually violate the law. (3) the NRC recognized its own errors, and in a series of actions beginning about five YEARS AGO deliberately bypassed the Administrative Procedures Act in an attempt to cover up the blunder by using an unlawful procedural process of probabilistic cost analysis (PRA) and cost benefit analysis, thereby dismissing issues with which Advisory Committee for Regulatory Safeguards (ACRS) found fault

The NRC then closed out the issue articulating supposed endorsement from the Advisory Committee for Regulatory Safeguards (ACRS), notwithstanding the Advisory Committee for Regulatory Safeguards (ACRS) stated concerns. (4) The GAO has noticed the approach taken by the NRC and Entergy on other issues, yet Entergy failed to act to comply with the regulations. This was the case, in particular, with respect to Indian Point 2.

The recent documents show the NRC intended to set aside compliance with federal rule 10 CFR 50.49. The Applicant obviously proposes that the present proceedings for relicensing the Indian Point plants yield no alternative other than for the public to accept the violations by Entergy and the NRC—and the consequential unsafe material conditions of the plant to withstand the design basis requirements specified in the current UFSAR, as well as, the proposed amended UFSAR for license renewal. New testing done by laboratories under contract from the NRC show cable failure rates on the order of 50%. Yet they closed the issue regardless under a high school quality economic analysis. The approach was not only unlawful but also, technically irresponsible. Ensuring the functionality of the numerous cables and components required for safe shutdown is one of the major requirements that licensees are required to perform because of the events of Three Mile Island (TMI). Some consider these actions *the* most major. To bypass them now is beyond reason, and violates the NRC's mandate to adequately protect public health and safety.

This contention should be admitted as is a matter of law, and as a matter of fact.

Therefore the NRC must deny the Applicant's LRA because it does not adequately address the license renewal requirements of 10CFR54, specifically

under 10CFR54.4, for those component required for renewal defined in 10CFR50.49(B)(1) for an aging management plan, thereby failing to adequately protect public health and safety.

L. Contention 18: Entergy's License Renewal Application Does Not Include an Adequate Plan to Monitor and Manage Aging of Plant Piping Due to Flow-Accelerated Corrosion During the Period of Extended Operation.

Issue Statement: Stakeholders assert that Indian Point 2 LLC's IP2 LLC's License Renewal Application does not include an adequate plan to monitor and manage aging of plant piping due to Flow-Accelerated Corrosion (FAC), as required pursuant to 10 C.F.R. § 54.21(a)(3). The plant piping is subject to aging management review, pursuant to 10 C.F.R. § 54.21(a), and FAC is an aging phenomenon that must be adequately managed. *See* NUREG-1801, *Generic Aging Lessons Learned (GALL) Report*, Revision 1, U.S. Nuclear Regulatory Commission. FUSE submits the Declaration of Mr. Ulrich Witte in support of this contention.

Scope and approach of the Flow –Accelerated Corrosion is noted as unchanged as compared to the present licensing basis. Therefore, by implication, scope of the program includes:

1. Extraction Steam System: (see e.g. IP3-RPT-EX-0911 for Unit 3)
2. Condensate System: (IP3-RPT-COND-0912)
3. Moisture Separator Drain System: (IP3-RPT-HD-00913)
4. Heater Drain System: (IP3- RPT-HD-00979)
5. Feedwater System: (IP3-RPT-0984)
6. Reheater Drain System: (IP3-RPT-HD-01144)
7. Moisture Separator Drain System: (IP3-RPT-MSD-01158)
8. Historical Inspection Data: (IP3-RPT-MULT-01471)
9. Small Bore and Augmented Piping Program: (IP3-00064.000-1)

A review of an Advisory Committee for Regulatory Safeguards (ACRS)

Transcript discussing the predictability of the industry accepted technical approach cited by the Applicant is precisely on point and worth of quoting the dialogue directly by the ACRS and the admissions by Entergy regarding the weakness in reliability of the methodology, and specifically addresses the Extraction Steam System. Mr. Rob Alersick of Entergy made the following comments during ACRS 2003 meeting in Rockville Chaired by Dr.

Graham Wallis:

Mr. ALERISK, [Entergy]: I've had the opportunity to be involved with flow accelerated corrosion since 1989 and in particular have modeled or otherwise addressed approximately 20 EPU efforts in the last two years. Dr. Ford made a very good point earlier when he said that the graph that we looked at did not

display a very good correlation between the measured results and the predicted results out of CHECWORKS. Programmatically— well, let me back up a second. That is certainly true in the example that we looked at. That is not always the case. CHECWORKS models are on a per line or per run basis. The run

CHAIRMAN WALLIS: Could we go back to that graph that we saw? The graph was a plot of thickness versus predicted thickness. Because if you looked at amount removed versus predicted amount removed, it seems to me the comparison will be even worse.

MR. ALEKSICK: That's correct. In fact —

CHAIRMAN WALLIS: That's what you're really trying to predict is how much is removed.

MR. ALEKSICK: Yes, that is true. And my point is that in some subsets of the model, the one that we looked at here which was high pressure extraction steam, the correlation between measured and predicted is not so good. And in some subsets of the model, the correlation is much better.

CHAIRMAN WALLIS: It looks to me that in some cases it's predicting no removal whereas in fact there's a lot of removal. *So the error is percentage wise enormous?* {emphasis is added}

MR. ALEKSICK: *Yes, exactly* [emphasis added]

Advisory Committee on Reactor Safeguards Thermal Hydraulic Phenomena Subcommittee, January 26, 2003.

Accurate specification of inspection frequency is admitted by Entergy as potentially containing enormous errors. Accurate inspection frequency is the key to a valid FAC management program. Entergy proposes, through reference to NUREG 1801, to use a computer model called CHECWORKS

to determine the scope and the frequency of inspections of components that are susceptible to FAC.

Accurate specification of scope and inspection frequency is the key to a valid FAC management program. Entergy proposes, through reference to NUREG 1801, to use a computer model called CHECWORKS to determine the scope and the frequency of inspections of components that are susceptible to FAC. Entergy also provides scope of the FAC program by a by inference and directly from the LRA only to include limited piping scope.

License Renewal Application Table 3.4.1 ¶ 3.4.1-29, and Appendix B § B.1.13 (stating that management of FAC is per NUREG 1801, which in turn recommends CHECWORKS) does not meet the requirements of CFR 54.22 Because the Indian Point 2 plant recently increased its operating power level by approximately 5%, and experienced and unprecedented steam generator tube rupture event. The profiles required for CHECWORKS and the grid check points are unsubstantiated based upon these two significant changes. Changing plant parameters including coolant flow rate, the CHECWORKS model cannot be used to determine inspection frequency at Indian Point2. CHECWORKS is an empirical model that must be continuously updated with plant-specific data such as inspection results. Once “benchmarked” to a specific plant, it makes accurate predictions so long as plant parameters, such as velocity and coolant chemistry, do not change drastically. It would take as

much as 10 or more years of inspection data collection and entry to the model to benchmark CHECWORKS for use at Indian Point 2.

The Applicant has a track record of broken pipes due to corrosion, the steam generator failure a design basis accident in spite of a very low Probabilistic Risk Analysis (PRA) prediction rate. Thus, Probabilistic Risk Analysis (PRA) or pipe failures are by themselves unacceptable, and the Applicant's technical basis for a program that prevents pipe rupture or component failure as described in the LRA is inadequate to meet the requirements of 10 CFR 54.21 and other parts of 10 CFR 50.

Based on the proposed program to monitor and manage FAC, Entergy cannot assure the public that the minimum wall thickness of carbon steel piping and valve components will not be reduced by FAC to below ASME code limits during the period of extended operation.

Finally wear limits acceptance criteria are inconsistent with industry guidance and precedence regarding LRA acceptance, and SER approval for other facilities. Therefore, the NRC must deny approval of the Applicant's LRA, because it does not include an adequate plan to monitor and manage the pipe FAC as required by 10CFR54.21(a)(3) and 10CFR50.

P. Contention 20: Leak-Before-Break analysis is unreliable for welds associated with high energy line piping containing certain alloys at Indian Point 2.

Issue Statement: Stakeholders contend that the Leak-Before-Break (LBB) analysis in the Applicant's LRA is unreliable and does not provide an adequate aging management plan.

The Leak-Before-Break (LBB) concept is associated with the nuclear power plant design principles with respect to pipe failures and their safety implications. It has been introduced as a means of **partially relaxing** the requirements concerning postulated double-ended guillotine breaks. During the past few years, Leak-Before-Break (LBB) has received increasing applications as a criterion for assessing or upgrading the safety of existing plants whose provision against double-edge guillotine breaks presents deficiencies compared to current requirements.

Technically, the Leak-Before-Break (LBB) concept, defined hereafter, means that the failure mode of a cracked piping is a leaking through-wall crack which may be timely and safely detected by the available monitoring systems and which does not challenge the pipe's capability to withstand any design loading. The concept relies on experiences that double ended breaks and other catastrophic failures of primary circuit piping are extremely

unlikely. Various design, operation, inspection and monitoring aspects have been considered as prerequisites.

In recent years and months. Indian Point 2 has had a disturbing track record regarding pipe integrity issues, as evidenced by the below time line as reported in the area's paper of record, the Journal News:

September 20, 2005: NRC and Entergy notify the public that radioactive water is leaking from IP2's spent fuel pool. The leak was discovered by contractors excavating earth from the base of the pool in preparation for the installation of a new crane, for use in transferring spent fuel from the pool to dry cask storage. NRC later admits that Entergy first discovered the leak twenty days earlier, but did not believe it was serious enough to warrant public notification. NRC orders a special inspection to determine the source of the leak.

October 5, 2005: Entergy notifies the NRC that a sample from a monitoring well located in the IP2 transformer yard shows tritium contamination that is ten times the EPA drinking water limit for the radionuclide, and is consistent with tritiated water. The NRC also states in its report that the monitoring well had not been checked since its installation in 2000, following the transfer of IP's ownership from ConEd to Entergy.

October 18, 2005 : The NRC and Entergy confirm that the radioactive leak discovered in August is greater than initially believed. The radioactive isotope, tritium, has been discovered in five sampling wells around Indian Point 2, while the leak at the spent fuel pool has increased to about two liters per day.

November 26, 2005 : The tritium leak at IP2 remains unsolved, nearly three months after its discovery. Entergy's use of underwater cameras and divers to visually inspect and test for leaks at three locations on the steel liner's surface yield no results. Entergy must now employ different cameras to inspect the liner near the bottom of the pool, where the radiation is too high for a human diver to enter.

December 1, 2005 : IP2 Spent Fuel Pool shows tritium levels in the groundwater at thirty times the EPA limit, the highest level of tritium contamination yet discovered. In addition, the NRC announces that preliminary tests of tritiated water found in the IP1 Pool Collection System contain too much tritium to be from the IP1 Pool, suggesting that tritium-laced water is being collected in the IP1 Drain from another, unknown source. The NRC and Entergy do not know where the leak is coming from, how long it has been leaking, or the extent of groundwater contamination under the plant.

December 24, 2005 A faulty valve seal that regulates the flow of nonradioactive water to one of the plant's four steam generators causes an unplanned shutdown.

August 24, 2006 Faulty valves trigger shutdown of Indian Point 2 Drainage problem developed with discharge valves in a 10,000-gallon tank of nonradioactive water.

December 1, 2006 A 1-inch steel alloy pipe that leaked non-radiated steam and water in the containment building that houses the nuclear reactor is repaired.

March 1, 2007 Control room operators unexpectedly shut down the Indian Point 2 nuclear power plant for the fifth time in 15 months after water levels in its steam generators suddenly dropped below normal.

April 4, 2007 A steam generator problem prompted workers to manually shut down the nuclear plant.. A problem with one of the two main boiler feed pumps that send water to the plant's steam generators malfunctioned and left water levels too low.

April 7, reported on 24, 2007 A new leak of the radioactive isotope tritium was discovered at Indian Point, coming from an underground steam pipe near the Indian Point 3 turbine building.

May 14, 2007 Tritium is found in the plants sewer pipes.

May 30, 2007 Indian Point 2 interrupts power production due to steam generator problems . The broken water valve is part of a system that

feeds water to four generators, producing the steam that turns turbines to make electricity.

September 7, 2007 an alleged pinhole sized leak in a conduit is found. In fact it is a leak in a 20-24 inch fuel transfer pipe, is leaking radioactive effluent.

One prerequisite is that locations of piping systems that are susceptible to stress corrosion cracking do not qualify for Leak-Before-Break (LBB) relief. Previously, butt welds associated with 82/182 alloys for example were considered to be free of SCC problems since PWRs operate in low oxygen environments. However, more recent events with these welds have made use of Leak-Before-Break (LBB) questionable for these weld alloys. These include VC Summers, and other PWR plants.

Industry guidance as well as emerging regulatory funded studies memorialized in a NUREG "Conference on Vessel Penetration Inspection, Crack Growth and Repair" have specifically warned against traditional reliance of Leak-Before-Break (LBB) credited in Section 4.7.2 of IP2 Section 4 LRA, in spite of the nickel-based alloy weld. [page 4.7-2 of the LRA].

Indian Point 2's LRA does not respond to this potential safety threat, and relies wholly on previous studies such as WCAP-10977m and WCAP-10931. These studies are out of date. See for example, NUREG/CR-6936.

“Probabilities of Failure and Uncertainty Estimate Information for Passive Components – A Literature Review.”

In addition, the NRC announced on March 13, 2007, the licensees of 40 pressurized water reactors will raise levels of vigilance concerning reactor coolant system (RCS) welds. The US Nuclear Regulatory Commission (NRC) has issued Confirmatory Action Letters (CALs) confirming the licensees’ commitment to put in place “more timely inspection and [weld] flaw prevention measures, more aggressive monitoring of RCS leakage, and more conservative leak rate thresholds for a plant to shut down to investigate a possible [coolant water] leak.” The measures should be put in place and welds inspected during an outage before the end of 2007. If no outage is scheduled this year, they must justify an extended schedule to the NRC.

The concerns are centered on welds containing Alloy 82 and Alloy 182, used to weld together alloys like Inconel 600 and 601 as well as dissimilar metals such as carbon steel and stainless steel. The steps were taken after the discovery of certain flaws in the welds of the pressurizer at the Wolf Creek plant, which “were repaired and did not affect the safe operation of the plant.” The CALs are an interim measure while the American Society of Mechanical Engineers updates its Boiler and Pressure

Vessel Code, which will subsequently be reviewed and incorporated into NRC requirements. See Declaration Number of Ulrich Witte contained in exhibit II.

Therefore Stakeholders reiterate that the NRC must deny the Applicant's LRA for Indian Point 2 because it does not contain a reliable and adequate Aging Management Plan with regard to piping and welds, specifically Leak-before-Break (LBB), which puts at risk public health and safety during the 20 year new superseding license.

M. Contention 19 through 22. The License's ineffective Quality Assurance Program violates fundamental independence requirements of Appendix B, and its ineffectiveness furthermore triggered significant cross cutting events during the past eight months that also indicate a broken Corrective Action Program, and failure of the Design Control Program, and as a result invalidate statements crediting these programs that are relied upon in the LRA.

Issue Statement: Stakeholders assert that the Applicant's ineffective Quality Assurance Program violates fundamental independence requirements of 10CFR50 Appendix B, and its ineffectiveness furthermore triggered significant cross cutting events *during the past eight months* that also indicate *a broken Corrective Action Program, and failure of the Design Control Program.*

The result of the cross cutting, inadequate programs included failures to incorporate issues such as design control breakdown, that resulted in

contaminated coolant spillage of 385-500 gallons, incorrect sections of piping cut during plant modifications, and indication of a lack of trust in employees to come forward in identifying safety culture related issues.

Specific failures included for example during the second quarter of 2007, inadequate procedures in violation of appendix B, criterion V, “instructions, procedures and drawings,” during an attempt to clear interference of sumps while implementing modifications to vapor containment and recirculation pumps on march 7, 2007. The root cause is cited as “human performance error”, yet multiple barriers of supervision, oversight, and flawed instructions conflicting from the work package. The root cause appears to not support the quality failure that the work package itself failed to ensure, that the piping interference was correctly planned and selected for cutting. This failure could have caused severe injuries to the work crew involved. This is an example of a cross cutting issue, were the root cause is improperly attributed, and the quality assurance failure appears to not be addressed. See inspection report 2007002. exhibit KK

A second example is Entergy’s ineffective quality assurance program which should have easily caught a trend of deficient procedures associated with temporary modifications. In this example, temporary modifications were

being implemented that affected normal control lighting power. The procedure lacked general precautions, limitations, and prerequisites to prevent low lighting condition, such that operators did not have adequate lighting to monitor control panels. Yet again, the root cause was attributed to human performance, as opposed to a programmatic, symptomatic cross cutting failure. The lack of fundamental controls on the temporary modification process, lack of supervisory oversight to ensure adequate procedures with basic and generic contents to protect the health and safety of the workers, as well as the lack of safe configuration of the plant during the modification should have been caught at multiple levels, including an independent and empowered Quality Assurance Program. *Id.*

A third example is a failure to establish adequate corrective actions associated with monitoring of the service intake bay level. This failure could have prevented entry into an emergency action level, and therefore endangered the health and safety of the public during a radiological emergency. This again raises a cross cutting issue of an inadequate corrective action program as well as an ineffective quality assurance oversight program. Entergy knew of the condition and yet failed to implement corrective actions until the issue was re-identified by the NRC. *Id.*

The above examples alone indicate that license renewal based upon accurate current configuration management and control of the facility is insufficient. However, a fourth example has profound significance in creating a lack of confidence that the Applicant for license renewal is addressing the actual in situ materiel conditions of the plant, its safe operation, and sufficient controls to ensure management of the facility as it ages beyond its design life.

In this example, a safety culture assessment result set was apparently not entered into the corrective action program. This was identified by the NRC, when Entergy failed to initiate condition reports identified during a 2006 safety culture assessment. Consequently, the adverse conditions were not evaluated and appropriate corrective actions were not identified in a timely manner. This failure by itself is sufficient to indicate that Entergy has a substantial safety culture work environment failure. Confidence by those workers that risk raising safety concerns, in spite of potential retaliation, will be immediately lost. Actual condition of the plant in terms of a baseline for managing aging is unknown, and essentially invalidates those specific programs that credit the current materiel condition of the plant in addressing Sections 3 and 4 of the License Renewal Application.

The NRC must deny the Applicant's LRA because it contains an ineffective Quality Assurance Program for an Aging Management that

violates fundamental independence requirements of 10CFR50 Appendix B, and its ineffectiveness furthermore triggered significant cross cutting events during the past eight months that also indicate a broken Corrective Action Program, and failure of the Design Control Program.

N. Contention 23: (Environmental) The Applicant's LRA does not specify, as required in 10CFR50.65 and 10CFR50.82(a)(1), an Aging Management plan to monitor and maintain all structures, systems, or components associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions.

Issue Statement: The Stakeholder's contend that the Applicant's LRA does not specify, as required in 10CFR50.65 and 10CFR50.82(a)(1), an Aging Management plan to monitor and maintain all structures, systems, or components associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions.

The condition of the Spent Fuel pool at Indian Point 2 is known to be compromised. Since at least 2005, when an independent contractor working on installing a crane in order to remove spent fuel into dry cask storage stumbled upon a underground leak at the corner of the pool, the NRC, the

Applicant and the public know that leaks exist. However, the extent, location, length and quantity of the leak remains unknown. What is known is that the Applicant failed to maintain the spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that such structures, systems, and components fulfill its intended function as required by 10CFR50.65 Requirements for monitoring the effectiveness of maintenance at nuclear power plants.

The requirements of this section are applicable during all conditions of plant operation, including normal shutdown operations.

10 CFR54.4 (a)(1) Each holder of a license to operate a nuclear power plant under §50.21(b) or 50.22 shall monitor the performance or condition of structures, systems, or components, against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components, as defined in paragraph (b), are capable of fulfilling their intended functions. Such goals shall be established commensurate with safety and, where practical, take into account industry-wide operating experience. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken. For a nuclear power plant for which the licensee has submitted the certifications specified in Sec. 50.82(a)(1), this section only shall apply to the extent that the licensee shall monitor the performance or condition of all structures, systems, or components associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions.

In the LRA for Indian Point 2 the Applicant does not propose an Aging Management Plan that adequately addresses the compromised condition of the Spent Fuel Pool #2, or an adequate Aging Management Plan to address the intended function of the pool which is the safe containment of radioactive contamination from leaking into the environment.

The spent fuel pool's 30 year old concrete and rebar, and steel liner, are currently in a compromised condition, and cannot maintain its intended function for a period of 20 more years.

In the past year, it was accidentally discovered that ongoing, unplanned, unmonitored leaks of liquid radioactive effluents, including tritium, strontium 90 and cesium 137, are leaking from Indian Point into the groundwater and Hudson River ("Radiation Leaks"). In most cases, the duration, extent, flow paths, and/or source of the Radiation Leaks, remain unknown. To date, Radiation Leaks have been discovered throughout the Indian Point 1, 2, and 3 complex. The Radiation Leaks can neither be repaired nor remediated until sources have been found.

As of the date of this submission, upon information and belief, the Radiation Leaks result from separate, and a multitude of onsite systems, structures and components in Spent Fuel Pool 2, including, the following: (A)

Cracks in spent fuel pools; (B) Failed or degraded fuel transfer tube sleeves;
(C) Cracks and fissures.

Since September 20, 2005 the integrity for the Spent Fuel Pools have been investigated by the Applicant, however to date the Applicant has not been able to identify and locate the leaks. The following is a chronology of the spent fuel problems at Indian Point:

1. September 20, 2005: the NRC and Entergy notify the public that radioactive water is leaking from IP2's spent fuel pool. The leak was discovered by contractors excavating earth from the base of the pool in preparation for the installation of a new crane, for use in transferring spent fuel from the pool to dry cask storage. Entergy first discovered the leak twenty days earlier, but did not believe it was serious enough to warrant public notification. NRC orders a special inspection to determine the source of the leak.

2. October 5, 2005: Entergy notifies the NRC that a sample from a monitoring well located in the IP2 transformer yard shows tritium contamination that is ten times the EPA drinking water limit for the radionuclide, and is consistent with tritiated water from a spent fuel pool. The NRC broadens its special inspection to include this new information. The NRC also states in its report that the monitoring well had not been checked

since its installation in 2000, following the transfer of IP's ownership from ConEd to Entergy.

3. October 18, 2005 : The NRC and Entergy confirm that the radioactive leak discovered in August is greater than initially believed. The radioactive isotope, tritium, is discovered in five sampling wells around Indian Point 2, while the leak at the spent fuel pool has increased to about two liters per day..

4. November 26, 2005 : The tritium leak at IP2 remains unsolved, nearly three months after its discovery. Entergy's use of underwater cameras and divers to visually inspect and test for leaks at three locations on the steel liner's surface yield no results. Entergy must now employ different cameras to inspect the liner near the bottom of the pool, where the radiation is too high for a human diver to enter.

5. December 1, 2005: Entergy reports to the NRC that an initial sample from a new monitoring well five feet from the wall of the IP2 Spent Fuel Pool shows tritium levels in the groundwater at thirty times the EPA limit, the highest level of tritium contamination yet discovered. The NRC still does not know where the leak is coming from, how long it has been leaking, or the extent of groundwater contamination under the plant.

6. February 24, 2007 a cracked fuel rod is found at Indian Point 2. in the reactor's spent-fuel pool .

7. On September 7, an alleged pin hole sized leak in conduit, a pipe 20-24 inches, a fuel transfer tube and a component of the Spent Fuel Pool 2 was found to be leaking.

The Applicant's license renewal application (LRA) for IP2 LLC fails to lay out, in detail, a workable aging management plans to deal with known leaks, in Spent Fuel Pool#2. The LRA, and the UFSAR's for Indian Point 2 inadequately address the currently existing, known and unknown, environmental affects of ongoing leaks from the Spent Fuel Pools, and fails to lay out a workable aging management plan for said leaks. The only plan set forth to date, with the consent of the NRC is leave the radioactive effluent in the ground, which in time will leach into further the ground water and the Hudson River.

Due to the location of the leaks on the banks of the tidal Hudson, by allowing the radioactive contamination to remain in the ground during the 20 year new superceding license period, the radioactive effluent leaking from Spent Fuel Pool #2 and other areas of the site will continue to be leached into the Hudson River, potentially harming and making unsafe the public within six communities near the tidal area of the Hudson currently using the river for

drinking water. New York City's emergency water station is located in Croton, just a few miles down River, and the County of Rockland has just received a proposal from United Water to use the Hudson River for drinking water.

Any other business or industry, such as a dry cleaner, gas station or chemical plant, that was leaking pollution into the groundwater and river, would be immediately fined and shut down, until all the leaks had been identified, stopped and fully remediated. By even considering the Applicant's LRA for an new superseding license of 20 years, prior to a comprehensive remediation of the Radiation Leaks, the NRC has clearly surrendered its role as a regulator, and has violated it's mandate to protect public health and safety.

Neither the Applicant nor the NRC have identified an adequate aging management program for the various known and unknown leaks, thereby endangering public health and safety, by permitting unregulated radioactive waste to continue to be released into the environment during the 20 year new superceding license period. This is not only an acceptable Aging Management Program issue, but also is indicative of irresponsible and negligent management by the Applicant and improper oversight by the regulator.

Therefore Stakeholder's assert the NRC cannot approve the Applicant's LRA until the integrity of Spent Fuel Pool #2 and other components/systems are restored, and the leaks from Spent Fuel Pool #2 and other sources are fully remediated.

- O. Contention 24: (Environmental) The LRA, and the UFSAR's for IP2 inadequately address the currently existing, known and unknown, environmental affects and aging degradation issues of ongoing leaks, and fails to lay out workable aging management plans for said leaks and systems imperative for Safe Shut down and cooling of the reactor.

Issue Statement: Stakeholder's assert that the Applicant's License renewal application (LRA) for IP2 LLC fails to lay out, in detail, a workable aging management plans to deal with known leaks, in the underground pipes, steam pipes and other systems critical to Safe Shut Down of the reactor, and cooling of the spent fuel pool. The LRA, and the UFSAR's for IP2 inadequately address the currently existing, known and unknown, environmental affects of ongoing leaks, and fails to lay out a workable aging management plan for leaks. Examples of inadequately addressed aging management issues which are poorly stated, vague and ambiguous include but are not limited to:

1. The reactor's coolant pump seal provides a critical leakage barrier between the pressure boundary and numerous rotating parts that seals

the pressurized reactor used in primary coolant systems. IP's LRA fails to provide adequate proof of a proper safety analysis of this critical seal, nor does it provide a detailed aging management plan, despite industry knowledge of leakage associated with this critical component. Unexpected and/or abnormal shaft movement or misalignment can introduce motions including but not limited to shaft tilt, radial offset and orbit, and depending on the magnitude and scope of this displacement, and thus the seal arrangement, creates potentially dangerous site specific operational issues of concern, and site specific wear (aging) effects that must be accounted for with a detailed site specific aging management plan.

2. It appears from IP2's LRA that applicant contends the feedwater heater is outside the scope of License Renewal. We disagree. The feedwater heater is a crucial component in maintaining thermal performance, but more importantly, aging issues unchecked contribute greatly to INCREASED pipe fatigue and failure, which in turn increases leakage issues for key component pipes in the reactor system. Simply stated, loss of feedwater will impose SEVERE STRESS on the entire plant in terms of increased heat flux in the fuel, and greatly increased (and associated fatigue) on feedwater nozzles, headers, and piping. 41. U.S. Nuclear Regulatory Commission, "Rates of

Initiating Events at U.S. Nuclear Power Plants 1987-1995”, NUREG/CR-5750, February 1999.

3. Various piping industry sources place the life expectancy of stainless steel pipes as little as 20 years without proper chemistry controls, and cumulative usage factors being improperly analyzed under finite element analysis and other mechanistic based failures often due to improper maintenance of the system. IP2 is now in its 33rd year of licensing. There exists no detailed aging and maintenance plan provides indication of adequate management of chemistry, or fundamental maintained requirements such as those required in 10cfr50.65 in the LRA. In addition, there are no commitments that provide a viable and workable pipe or component replacement strategy for key component pipes needed for the cooling and safe shut down of the reactor.

Unplanned, unmonitored leaks of liquid radioactive effluents, including tritium, strontium 90 and cesium 137, are leaking from Indian Point into the groundwater and Hudson River (“Radiation Leaks”). In most cases, the duration, extent, flow paths, and/or source of the Radiation Leaks, remain unknown. To date, Radiation Leaks have been discovered throughout the Indian Point 1, 2, and 3 complex. The Radiation Leaks manifestly can neither be repaired nor remediated until sources have been identified and/or located.

As of the date of this submission, upon information and belief, the Radiation Leaks result from separate, and a multitude of onsite systems, structures and components, including, the following: (A) Failed or degraded pipes (including pipes that transport liquids and pipes which transport steam); (B) Cracks in spent fuel pools; (C) Failed or degraded valves; (D) Reactor vessel failed welds in the bottom or vessel (which inspectors have been unable to adequately view and reach); (E) Pinhole leaks around weld joints; (F) Failed or degraded gauges; (G) Failed or degraded fuel transfer tube sleeves; (H) Failed or degraded steam generator tubes; (I) Inadequate or improperly operating drain systems; (J) Cracks and fissures.

The facts provide that pipes both stainless and carbon alloy are cracking and breaking at Indian Point 2. For example, only recently on September of 2007, Entergy admitted to finding a leak in the conduit that is a part of the fuel transfer canal between the reactor and the spent fuel pool. The article in the Journal News stated in part:

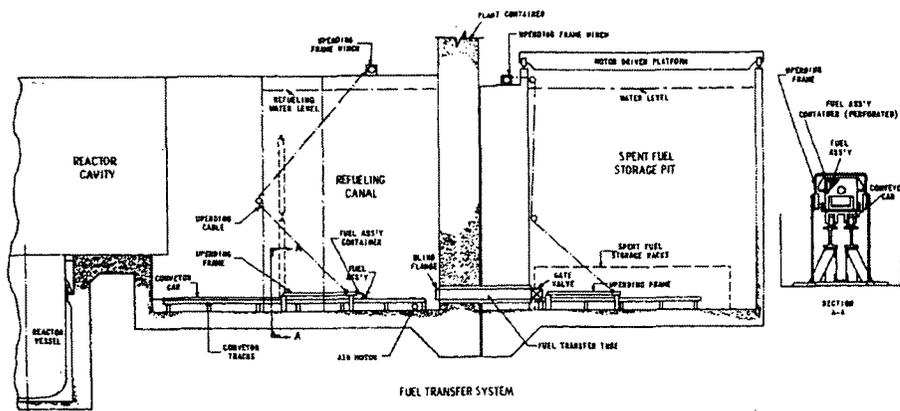
By BRIAN J. HOWARD
THE JOURNAL NEWS
(Original publication: September 7, 2007)

BUCHANAN - Workers have discovered a pinhole-sized leak in a *conduit* used to transfer spent fuel from the reactor to the containment pool at Indian Point 2.

The leak was found Wednesday during testing for groundwater contamination from leaks of radioactive tritium and strontium 90 that were first discovered in 2005.

“It appears that there is a potential pinhole leak in the fuel transfer canal, which we believe could be a contributing source to the groundwater contamination that we’ve been talking about,” said Jim Steets, a spokesman for Entergy Nuclear Northeast, the plant’s owner.

A conduit is commonly understood to be an electrical conduit on order of 1 or 2 inches in diameter. However this is a gross misrepresentation, as the pipe in question is in fact a 20-24in pipe. There is a world of difference between conduit and pipe, and the Applicant and NRC clearly know the difference. Entergy’s representative purposely released misleading information to the public, when he alleged it to be pin hole sized leak in Further, the leak is more than likely, to be a leak in the FUEL TRANSFER TUBE, which may have a much greater impact on the integrity of the facility.



CONSOLIDATED EDISON INDIAN POINT UNIT No. 2	
UFSAR FIGURE 9.5-1	
FUEL TRANSFER SYSTEM	
MIC. No. 1999MC3886	REV. No. 16A

It is worthy of note that irradiated water from this recently discovered leak, and all the other leaks flow into fissures in the bedrock under the plant, and will eventually leach into the tidal Hudson River. Many of the cracks and fissures in the bedrock were created when the bedrock was blasted as the plant was first built, and therefore the irradiated effluent can take a very convoluted route into the environment, the groundwater and the Hudson River.

The multiple leaks at Indian Point 2 provide direct evidence of underground pipe failure and/or degradation due to the aging of various systems. Such systems are not being adequately inspected or addressed by the applicant, and proof that the applicant's management of aging issues is wholly inadequate.

In fact, certain Radiation Leaks, including tritium leaks allegedly from underground pipes on the "non-radioactive" side of plant were discovered purely by random accident on April 7, 2007, rather than via a coordinated, intelligent aging management and inspection plan. Other leaks were discovered, only because special excavation work being done by a contractor led to investigations after tritium contaminated water was found seeping from surface cracks in spent fuel pool number 2, not through regular inspection and maintenance. In fact the length of time and extent of the Radiation Leaks have existed remains unknown.

The multiple leaks are symptomatic of an aging system, that was not properly and comprehensively inspected and maintained during the initial license period. There is no reason to believe that during the 20 years of the new superceding license the Applicant will do a better job of properly inspecting, maintaining and managing the aging facility. Nor does the LRA identify an aging management plan to locate, stop and remediate the current and future leaks. There are only vague reference to best industry standards, and sparsely defined sketches of potential aging management plans to deal with leakage issues caused from corrosion, fatigue, thermal shock, FAC (flow-accelerated corrosion), and other leakage causes of concern during the 20 year period of license renewal.

At the Kashiwazaki plant in Japan, in July 2007, radiation leaked into the environment through a small hole, then flowed along electrical cabling, then into an air conditioning duct, then into a drainage ditch, and then finally out into the sea.) The existence of the Radiation Leaks provides direct evidence of underground pipe failure and/or degradation that has not been adequately addressed by the licensee. Ordinary maintenance failed to reveal the specific locations of numerous Radiation Leaks, therefore the limited aging management programs indicated in the LRA will also fail to identify radiation leaks before they cause damage to the environment, or before the

leaks become breaks. As example, there is no aging management plan to address known potential pipe bursts in piping adjacent to plugged tubes in IP2's LRA. Further the LRA does not specify comprehensive visual inspections, vacuum testing and ultrasonic testing for all pipes, including buried pipes to determine corrosion, failure, environmental fatigue and other aging affects.

Moreover, at an April 26, 2007 public NRC meeting in Cortlandt, N.Y. ("April NRC meeting"), NRC and Applicant representatives conceded that they did not even know the metallurgic composition of much of the underground piping. Without a complete and comprehensive knowledge of the composition and layout of the underground piping system the Applicant will be unable to implement an adequate aging management plan.

Inaccessibility limits the inspection and testing of substantial segments of these aged and leaking pipes and components which play crucial roles in the cooling and safe shut down of the IP2 reactor, especially those having a buried or embedded environment. Thus, the Applicant cannot assure the NRC and the public that they will be able to manage effects of aging, soil elements, the intake of brackish water from the Hudson River and/or storm surges during the 20 year new superceding license period, which have already caused dangerous corrosion of Indian Point's entire piping, valve and gauge system

resulting in the current leaks. It is further noted, that IP2 has not addressed the unique corrosion issues associated with the use of brackish water in the coolant process.

In the past few years there has been a significant increase in the amount of leaks found, at IP2, which indicates that as the plant ages there will be increased frequency of pipe leakage during the 20 year period of license renewal. Since August 2005 the Applicant has not been able to identify the source of the leaks, the duration of the leaks. On December 1, 2005, the applicant reported to the NRC that an initial sample from a new monitoring well five feet from the wall of the IP2 Spent Fuel Pool shows tritium levels in the groundwater at thirty times the EPA limit, the highest level of tritium contamination yet discovered. In addition, the NRC announces that preliminary tests of tritiated water found in the IP1 Pool Collection System contain too much tritium to be only from the IP1 Pool, suggesting that tritium-laced water is being collected in the IP1 Drain from another, unknown source. The Applicant still does not know where the leak is coming from, how long it has been leaking, or the extent of groundwater contamination under the plant.

August 24, 2006 Faulty valves trigger shutdown of Indian Point 2

Drainage problem. Workers shut down Indian Point 2 yesterday morning after problems developed with discharge valves in a 10,000-gallon tank of nonradioactive water.

November 29, 2006: An unplanned shutdown at Indian Point 2, because a 1" steel alloy pipe was found leaking non-radiated water in the containment building.

April 24, 2007: A new leak of the radioactive isotope tritium has accidentally discovered at Indian Point, coming from an underground steam pipe near the Indian Point 3 turbine building, company officials and federal regulators confirmed yesterday.

September 7, 2007 a pinhole leak As recently as September 7, 2007a pinhole leak in the fuel transfer canal, was found which may be a contributing source to the ongoing groundwater contamination of Strontium and Tritium.

All of the Radiation Leaks point to the imperative necessity for a complete inspection and comprehensive corrosion analysis of all underground and critical in scope piping systems and associated equipment that contribute to significant aging, fatigue, corrosion and vibrational degradation . Compromised pipes can cause or fail to mitigate a serious accident, including a core damage event. Therefore, to properly maintain the aging facility any and all compromised pipes must be replaced, including but not limited to, the

ones under the reactor where information from discussions with Indian Point workers leads us to believe seals may be leaking.

The insufficiency of a reliable aging management program in the LRA of IP2 LLC increases the exposure risks of plant workers during the 20 year period of license renewal, and greatly increases the potential for a significant nuclear incident at the Indian Point facility during the period of license renewal, as increasing leak rates negatively impinge upon the core cooling component structures, and increase the risk of severe pipe ruptures that would lead to a release of unmonitored and uncontrolled radioactive contaminants into the environment, including the Hudson River, thus presenting a significant and increased risk to public health and safety.

The NRC itself has expressed concerns on this very issue as relates to ALL license renewal requests, and requested as a part of the license renewal application process that their licensees perform an assessment to ascertain and/or determine the potential severity of the effects of reactor water coolant environment on fatigue. Further, where appropriate, the NRC further suggested license renewal applicants provide a proper aging management plan to deal with said fatigue issue. This concern was/is included in discussions found in NUREG/CR-6674.

The Applicants in their LRA for IP2 LLC make a brief reference to reliance on a nuclear regulator approach to this significant issue, yet fail to identify with specificity an aging management plan which deals with the unique site specific environmental effects at the Indian Point facilities. The adequacy, or lack there of, as relates to this specific aging management issue is a matter of fact, that can only be resolved after interested parties, including community Stakeholders have an opportunity to submit evidence, cross examine expert witnesses, and a conduct a full review of Entergy's supporting and/or discovered documents and a full in depth review has been conducted on the part of the hearing board.

Entergy's Indian Point facility (IP1, IP2 and IP3) have numerous serious leak issues. It is further known that leaks in the cooling pipes (critical components in the reactor water coolant process) present a serious plant specific safety issue/problem if an adequate aging management plan is not in place. Currently it is not. Maintenance logs and other documents that will be found in pre-hearing document discovery will prove IP2 and IP3's aging management plan for this issue is woefully inadequate. Further, there are numerous NRC inspection documents identifying leak issues at the plant which will support this contention. The NRC and the nuclear industry have admitted that environmental fatigue will increase the rate, volume and number

of these leaks during the period of 20 years of additional operation of these aged facilities

The industry's newly developed and unproven approach to this known aging issue is inadequate, and fails to adequately address the unique environmental issues specific to IP2, as said plants rely upon a unique brackish water supply for their reactor core cooling system.

Generic industry approach is inadequate to address the unique site specific leaks in the pipes, as evidenced by various already identified leaks. Leaks are a precursor to PIPE BURSTING in nuclear reactors primary coolant systems. See Declaration of Ulrich Witte, exhibit yy

IP2's poorly defined and inadequate aging management issues as relates to this specific issue greatly increases the chances of a significant incident. such as large pipe burst, that could lead to an off site release of radioactive contaminants, thus creating a significant risk to human health and the environment, if as is contended here, said aging management plan is inadequate to properly address this aging management issue.

The NRC and Entergy do not have an aging management plan for the underground Radiation Leaks, thereby endangering the public's health and safety, by permitting unregulated radioactive waste to continue to be released into the environment during the 20 year new superceding license period. Not

only is lack of an adequate aging management program at issue, but also it is indicative of irresponsible and negligent management by the Applicant, Entergy, and improper oversight by the regulator, the NRC.

The Applicant initiated actions to pump out the Unit-1 Containment Spray Sump through a filter/demineralizer system, designed to remove Sr-90, and investigate the source and means of the Sr-90 groundwater contamination. This fact raises the question, is Entergy in violation of the terms of their SafeStor for IP1. When the applicant started to remove the underground leaks by pumping the radioactive contamination out of the ground, it caused more radioactive material to be released.

Therefore the NRC ordered that the Applicant to stop removing the radioactive effluent from ground, and to only monitor . See exhibit JJ Due to the location of the leaks on the banks of the tidal Hudson, by allowing the radioactive contamination to remain in the ground during the 20 year new superceding license period, the radioactive effluent will continue to be leached into the Hudson River, potentially causing great harm to human life, as 6 communities within the tidal area of the Hudson currently use the river for drinking water, New York City's emergency water station is location in Croton, just a few miles down River, and the County of Rockland has just

received a proposal from United Water to use the Hudson River for drinking water.

Critically, compromised pipes can cause or fail to mitigate a serious accident, including a core damage event. Therefore effects of or associated with aging – including embrittlement, corrosion, rust, heat, and microbiological and chemical agents – may destabilize and weaken the tensile strength of the piping and associated equipment and components. This presents an unacceptable risk during an extended life of the plant which must be specifically and fully addressed by the aging management program. The aging management plan iterated in the Indian Point application utterly fails. .

The Applicant has displayed plume maps of the strontium 90, tritium and cesium which is pooling underground due to the ongoing leaks, but have claimed the maps to be proprietary, in addition a few weeks after the deadline for Intervener Petition's the applicant will deliver a new leak report. Therefore, once again, FUSE respectfully requests the opportunity to amend this contention or submit new contentions after the new leak report and plume maps are made available to the public Stakeholders be granted.

FUSE contends that the NRC must deny the Applicant's LRA because it fails to adequately address the current Radiation Leaks, and fails to provide

an effective and adequate Aging Management Plan with regard to future Radiation Leaks, and therefore adequately protect public health and safety, and the environment.

Supporting Document References for This Contention

1. NUREG/CR-5999 (ANL-93/3), "Interim Fatigue Design Curves for Carbon, Low-Alloy, and Austenitic Stainless Steels in LWR Environments," April 1993.
2. NUREG/CR-6260 (INEL-95/0045), "Application of NUREG/CR-5999 Interim Fatigue Curves to Selected Nuclear Power Plant Components," March 1995.
3. NUREG/CR-6583 (ANL-97/18), "Effects of LWR Coolant Environments on Fatigue Design Curves of Carbon and Low-Alloy Steels," March 1998.
4. NUREG/CR-5704 (ANL-98/31), "Effects of LWR Coolant Environments on Fatigue Design Curves of Austenitic Stainless Steels," April 1999.
5. NUREG/CR-6674 (PNNL-13227), "Fatigue Analysis of Components for 60-Year Plant Life," June 2000.
6. U. S. Nuclear Regulatory Commission, Generic Safety Issue 190, "Fatigue Evaluation of Metal Components for 60-Year Plant Life."

- P.** Contention 25: The Applicant has failed in its LRA to include as part of the EIS Supplemental Site Specific Report any refurbishment plans in order to meet the mandates of NEPA, of NRC 10CFR 51.53 post construction environmental reports or of NRC 10CFR 51.21.

Issue statement: Stakeholders assert that the Applicant's LRA fails to comply with 10CFR 51.21 and 10CFR51. 23, by failing to provide

refurbishment plan, for already planned refurbishment during the proposed 20 year new superseding license.

The Applicant is required in its EIS Supplemental Site Specific Report required to fulfill the requirements of NEPA, and codified in 10 CFR Rules and Regulations as defined in 51.21 and 51.53 requires NRC licensees filing a LRA for the purpose of license extension to include as a part of the EIS Supplemental Site Specific Report any refurbishment issues/plans and the environmental risks associated with said refurbishment. The Applicant by evidence provided below failed to comply with this rule.

In the Applicant's filed LRA for Indian Point 2, in Appendix E, Supplemental Environmental Report, section 3.3 of its Environmental Report Refurbishment Activities, the Applicant simply and dismissively states that 'there are no such refurbishment activities planned and/or anticipated at this time' and thus provide the Nuclear Regulatory Commission no Environmental Report on refurbishment. By claiming that there are no refurbishment activities planned, the Applicant indicates that there are no environmental concerns which need to be addressed in the LRA.

However, the Applicant omitted the fact that it had already prepared for a major refurbishment by ordering a Replacement Reactor Vessel Heads for Indian Point #2, with delivery date scheduled for October 2011, as evidenced

by the attached page (a true and accurate copy of the PDF web based file) of the Doosan Heavy Industries Construction Co., Ltd presentation at the Burns & Roe 17th Annual Seminar, Powering the Future, March 21, 2007 and contacted the engineering and construction required for this substantial refurbishment. Attached hereto as Exhibit LL and rewritten below:

Entergy Replacement Reactor Vessel Head

(A) Customer: Entergy

(B) Projects: ANO #2 (Site Delivery: January, 2008), Waterford #3 (Site Delivery: February, 2008), Indian Point #2 (Site Delivery: October, 2011), and Indian Point #3 (Site Delivery: October, 2012)

(C) Primary Contractor: Westinghouse

(D) Scope: Four (4) RRVHs

(E) Two (2) sets of CRDM (for Indian Point #2 & 3 only)

(F) Manufacturer: DOOSAN (EMD supplies CRDM as the sub supplier)

The plans to potentially replace the reactor head for Indian Point Unit 2 and 3 as well as the CRDMs is costly—of order of 15-20 million dollars per unit. The applicant only purchased these heads for Indian Point and two other facilities. Not for the entire fleet. FUSE asserts that these plans even if actual

installation date is not established, or even if the modification is potentially firm at this point that the Stakeholders are entitled to more than just mere silence on this issue.

The Doosan presentation is clear evidence of the Applicant's plans for refurbishment. Refurbishment on the scale of a reactor head replacement, which has already been ordered and with a specific delivery date makes this omission by the Applicant deliberate. Hundreds of people are involved in a decision to replace a reactor vessel head, and requires senior management approval of such a costly refurbishment. Since at least 2003, boric Acid corrosion and rust in the reactor vessel head were degradation issues known by the Applicant, and may be major contributory factor in the Applicant's decision to plan the significant refurbishment of reactor vessel head replacement

The Applicant is a multinational corporation with extensive knowledge and expertise in the nuclear reactor industry and with ownership rights to eleven nuclear reactors in America. Therefore the omission of this significant and already planned reactor refurbishment during the proposed 20 year new superseding license, from the Supplemental Environmental Report attached to the Applicant's LRA as Appendix E was neither accidental, nor a mere oversight in compilation of its License Renewal Application.

Further, the Applicant offers itself up as a supplier of expert assistance in the filing of LRA's to other NRC licensees considering a 20 year license renewal for their own facilities.

1. Basis for Contention

(i) Therefore, Stakeholder's content that the Applicant, the second largest reactor owner in the United States, deliberately hid material facts, and egregiously submitted a materially false LRA, in a violation of 10 CFR50.5 and 10CFR50.9, by attempting to hide significant environmental, health and safety concerns in an attempt to streamline approval of its LRA, that could greatly impact the safety of the Stakeholder's community.

(ii) The Applicant has not fulfill its legal obligation as delineated in NEPA reference and the Code of Federal Regulations reference to prepare and submit, as part of their applications, a description of the proposed refurbishment actions, including any plans by the Applicant 'to modify the facility' and describe in detail the modifications affecting the environment or affecting plant effluence that affect the environment' 10CFR 53(c) (1)(2).

(iii) Moreover, 10CFR 5 (c)(3)(ii)(E) mandates that 'all license renewal applicants shall assess the impact of refurbishment and other license renewal related construction activities on important plant and animal habitats. Additionally, the Applicant shall assess the impact of the proposed action on

threatened or endangered species in accordance with the Endangered Species Act'.

(iv) Replacement of a reactor vessel head for Indian Point 2 is not only a refurbishment issue, but a significant environmental issue that affect public health and safety on many levels, and that must be evaluated during the license renewal process. The means and method of disposal of the irradiated old reactor vessel heads must be addressed, in the Aging Management Plan. Indian Point was not designed, nor licensed to act as a radioactive waste storage facility, however with the closing of Barnwell to Indian Point radioactive waste streams beginning in 2008, the impacts of any and all radioactive waste streams, including disposal of old reactor vessel heads, generated at Indian Point, are an issue of paramount importance for the safety the Stakeholder community.

(v) The Applicants have failed to provide the mandated reports specificity required, and have also failed to provide environmental reports required with regard to its plans to change or modify the facility or refurbish same.

(vi) As Stakeholders living within 3, 10 or 50 miles of the Indian Point facility owned by the Applicant any reactor refurbishment issue that

contributes to any potential environment, health or safety risks is of great concern.

Hiding or ignoring significant information is in contradiction to the NRC regulations which requires LRAs to be complete, accurate and truthful. The NRC must revoke it's acceptance of the Applicant's LRAs as complete and accurate, and further take administration legal action to hold the Applicant accountable.

2. Contention is Within Scope in the License Renewal Process

The reactor core coolant system, and all its primary parts, including piping are within the scope of the license renewal process, as is the reactor vessel head. By proxy, and by NRC regulation, planned refurbishment of the reactor head for Indian Point 2 is within scope. Therefore, this contention brought by the Stakeholders against Indian Point 2 regarding refurbishment is within the scope of Entergy's License Renewal Application.

3. Contention Raises Material Issues of Fact and/or Law

There exists issues of fact and/or law in this contention. The reactor vessel head replacement is never a like-for-like switch of components or equipment, and is one of the most critical refurbishments that a reactor licensee can undertake, In some situations replacement of the reactor vessel head may require cutting a hole into the containment.

1. Reactor vessels are far beyond tangential components. They contain the nuclear fuels in the plants, and, over time, are irradiated which can lead to embrittlement, deterioration, loss of material, and less able to withstand flaws which may be present.

The 2002 incident at the Davis Besse Nuclear Plant highlights the integral nature of the vessel and the vessel heads. Despite this vast knowledge pool, the Applicant neglected to list, describe or report the vessel head replacement, or any other refurbishment actions in the environmental supplement of the LRA and marked as Appendix E.

2. The omission of significant refurbishment issues from the EIS Appendix E cause Stakeholders to claim that the Applicant has egregiously taken the position that the above changes and reactor modifications are not within the purview of the LRA application, in violation of NRC regulations. The refurbishment of the vessel head, and other proposed changes and refurbishments necessary for the replacement of the reactor vessel head, yet undisclosed, are within the scope of 10CFR 53 and 10CFR 54.21. As stated by the NRC:

For the purposes of the Environmental Impact Review, refurbishment describes an activity or change in a facility that is needed to support operations during the renewal term.

The replacement of the reactor vessel heads are needed to support operations during the applied for new superseding term of an additional 20 years. Further the 10CFR 53 and 10CFR 54.21 require the Applicant to include such reactor vessel head replacement in the environmental report, delineating with specificity all potential impacts, remediation, and alternatives, including but not limited to, worker radiation exposure, construction traffic and noise, construction runoff, radiation releases, impacts on plant and animal habitats, and the impact of the proposed actions on threatened or endangered species in accordance with the Endangered Species Act.

NRC places great importance on integrity and honesty in the submission of documents to the agency, to ensure trustworthiness and integrity are beyond reproach. The NRC writes,

It is paramount to the mission of the NRC for the licensee to maintain information and communicate with the NRC in such a manner that all information is complete and accurate in all material respects to allow the NRC to complete their mission.

It is the responsibility of the licensee personnel to work together to ensure the health and safety of the public and plant personnel.

Effective, complete and accurate communication is required to ensure this vital goal, regardless of the potential financial or business impact.

Reactor vessel head replacement is a complex reactor refurbishment project that involves almost every major department, and 100's of personnel, including Senior Members of Management. Omission of such a significant project from the LRA applications of IP2 is a serious violation of 10 CFR 50.5 and 50.9.

(i) § 50.5 Deliberate misconduct

(A) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(B) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart

(C) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

- (1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or
- (2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

(ii) 50.9 Completeness and accuracy of information.

(A) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee *shall be complete and accurate in all material respects*.

(B) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the

applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

Realizing the importance of public trust, and how easily it can be lost, the NRC places great importance on the completeness and accuracy in all materials submitted to them, and this standard takes on far more importance in an issue as License Renewal of a reactor, which has such large term potential impacts on a community, public health and safety.

Contention is Supported By Facts and/or Expert Opinion

The Stakeholder have met the minimal requirements of the 10 CFR rules and regulations in presenting this contention in a concise statement of the facts adequate to establish that said contention is entitled to a further and complete review of the issues contained herein. It is pointed out that the rules governing the license renewal process, and hearings lay out some basic criteria that a Stakeholder must meet to have a contention accepted for further review. *Section 2.309(f)(v) requires,*

...a concise statement of the alleged facts or expert opinion which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the H petitioner intends to rely to support its position on the issue.

Misrepresentation in Licensee communication and documents are very serious violations of NRC Rules and Regulations. Further, the very principals of NRC's enforcement policy make it abundantly clear that significant violations of the 10 CFR rules and regulations can be subject to license suspension and/or termination.

(iii) NRC Enforcement Policy Excerpts

The primary purpose of the NRC's Enforcement Policy is to support the NRC's overall safety mission in protecting the public health and safety and the environment. Consistent with that purpose, the policy endeavors to:

(A) Deter noncompliance by emphasizing the importance of compliance with NRC requirements,

(B) Encourage prompt identification and prompt, comprehensive correction of violations of NRC requirements.

Therefore, licensees, contractors, and their employees who do not achieve the high standard of compliance which the NRC expectations may be

subject to enforcement sanctions. Each enforcement action is dependent on the circumstances of the case. However, in no case will licensees who cannot achieve and maintain adequate levels of safety be permitted to continue to conduct licensed activities.

Herein, the Stakeholder are raising very troubling issues of both fact and law. The Applicant, at best, has made a critical error which should cause the NRC to dismiss the LRA.. At worst, the Applicant has purposely attempted to omit facts, thereby misrepresenting its plan to the NRC and the public, during the proposed 20 year new superseding license. The undersigned therefore respectfully request that the Applicant's LRA be denied due to the fatal errors in the same.

- Q. Contention 26: Environmental Effects and Cascading Consequences on the Aging structures, deteriorated conditions and compromised systems, of a Terrorist Attack On Aging Indian Point Nuclear Reactors Contention are not considered in the LRA for IP2.

This Contention is written in honor of the brave men and women who gave their lives in the World Trade Center, American Airlines Flight 11, American Airlines Flight 77, United Airlines Flight 175, United Airlines Flight 93 and the Pentagon.

Stakeholders claim that the environmental effects and cascading consequences on the aging structures, deteriorated conditions and compromised systems, of a terrorist attack on Indian Point Nuclear Plant are not considered in the LRA for IP2.

On September 11th, 2001 America experienced the darkest day in our nation's history when two planes filled with terrorists flew into the World Trade Center in New York, New York.

2996 brave souls woke up to a bright beautiful sunny fall day, not knowing that in a few scant hours they would become the faces etched into our souls, the victims never forgotten, the heroes remembered and honored each and every year as America remembers our darkest hour. The lives of every American were changed that day, the destiny and direction of our nation changed forever. We were attacked on our home soil, the sacred lands of America invaded by radical terrorist bent on forcing their evil will upon a free people, using fear, intimidation and despicable terrorists attacks to bring America to its knees.

One of the hijacked planes used the Hudson River as a guide, flew directly past the twin domes of the Indian Point Reactors. Notably, the 9/11 Commission learned that the original plan for a terrorist spectacular was for a larger strike, using more planes, and including an attack on nuclear power

plants. In an Al-Jazeera broadcast in 2002, one of the planners of 9/11 said that a nuclear plant was the initial target considered.

We also know from the 9/11 Commission's investigation that, even after the plot was scaled down, when Mohammed Atta was conducting his surveillance flights he spotted a nuclear power plant (unidentified by name, but obviously the Indian Point nuclear power plant) and came close to redirecting the strike. National Research Council analyses and post-9/11 intelligence has also indicated that the U.S. nuclear infrastructure is viewed as an alluring target for a future terrorist spectacular. As the Chairman of the National Intelligence Council stated in 2004, nuclear power plants “are high on Al Qaeda's targeting list,” adding that the methods of Al Qaeda and other terrorist group may be “evolving.”(*Council on Intelligent Energy & Conservation Policy (CIECP) comments to proposed rule 10 CFR Parts 50, 72 and 73, regarding power reactor security requirements at Licensed Nuclear Facilities, March 27, 2007 Re: Proposed Rule: Power Reactor Security Requirements (RIN 3150-AG63)*)

The nuclear industry, NEI and the NRC use a statistical analysis to justify eliminating the environmental effects of a terrorist attack from review and consideration in Entergy's License Renewal Applications for IP2 and IP3. Despite the ruling in Diablo Canyon's “Mother's For Peace” case the Ninth

Circuit Court ordered that the effects of a terrorist attack are to be included in the Environmental Review required by NRC regulation 10CFR 51.53 to fulfill the NRC's NEPA requirements. However, the NRC has decided to allow industry financial concerns to over ride the Agency's singular and most important goal, the protection of human health and the environment.

Even though since 9/11 an entire cabinet level department has been created and billions of tax payer dollars are being spent on Homeland Security to protect against terrorism.

The problem is, statistics, risk modeling analysis worked out on some computer do not reflect the reality that is life. As those towers came down, as New Yorkers and citizens from around the world lost their lives in the blink of and eye, NRC's assurances that and attack on a nuclear reactor were so remote as to almost not exist rings falsely in our ears.

We, the citizens of New York know better than any one that terrorists can plan, mount and carry out a successful attack on a target within the borders of the United States of America, we learned first hand how horrendous the aftermath of such an attack can be. We do not accept NRC's false assurances that a pathetic DBT, and a poorly trained private security force can keep us safe. The costs associated with the aftermath of 9/11 are far

to high to count, the loss of human life far too priceless to put a dollar value on. We can replace the energy Indian Point produces, but not the lives.

So, in honor of those fallen heroes, we the citizens of the Hudson River Valley living within 50 miles of Indian Point raise our voices as one in demanding that the environmental costs associated with a terrorist attack be included in Entergy's License Renewal Applications process for Indian Point Reactors Two and Three as was ordered by the Ninth Circuit Court of Appeals in the Diablo Canyon "Mothers For Peace" ruling.

Basis for Contention

1. As stakeholders, petitioners, and property owners living within 3, 10 and 50 miles of the Indian Point facility owned by two unique and separately owned Entergy Limited Liability Corporations (IP2 LLC and IP3 LLC) we are extremely concerned about the potential effects of any incident at the Indian Point Energy Center Site that could result in off site release of radioactive contaminants.
2. The National Environmental Policy Act (NEPA) requires the NRC to require an environmental study of the effects of given events in evaluating a licensing request on the part of their licensees. The preamble of this act reads in part:

"To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to

promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation..."

The law applies specifically to federal agencies and the programs they fund and/or regulate. Essentially it requires that, prior to taking any "major" or "significant" action, the agency must consider the environmental impacts of that action.

3. Entergy's License Renewal Application (LRA) for IP2 and the 20 year period of additional reactor operation it represents is a "major" or "significant" event/action on the part of a Federal Agency, therefore the rules of law and procedure found in NEPA apply to this relicensing process. NRC as an agency has accepted the reality that NEPA applies to many of the actions they take as an agency as is witnessed by their own regulation 10CFR 51.53 which was created as the NRC's implementing criteria for their agency's responsibilities in abiding by the laws and constraints found in NEPA.
4. The action forcing provision of the NEPA law requires an Environmental Impact Statement (EIS) to be written, which outlines the risks, and the costs to human health and the environment, should that risk become a reality for all major federal actions which may have a

significant impact on the environment. Further, the requirements of NEPA state that the agency (in this case, NRC) must involve the public by giving them notice and allowing them to comment on the proposal. The only exception is if the proposal falls within a previously-established "Categorical Exclusion" which is a category of actions that generally are not likely to have significant impacts. In such rare cases neither an EA nor an EIS needs to be prepared so long as the proposed action does not have any unusual characteristics that create potential for risk significant impacts.

Even if the relicensing of IP2 fell into this "Categorical Exclusion", it would still require an EIS by virtue of the unusual characteristics of nuclear reactors that raise the potential for risk significant impacts.

5. The NRC in numerous licensing activities involving nuclear facilities, specifically in relicensing actions, has wrongfully attempted to narrow the scope of the EIS. Specifically, the NRC has attempted to remove from inclusion in the EIS some crucial risks and the costs of any aftermath of such events.

A) The aftermath and significant impacts on the environment should a successful terrorist attack occur at the Indian Point Energy Facility located in Buchanan, New York. NRC wants to rely upon best estimate modeling by the self vested nuclear industry to claim the likelihood of a terrorist attack is, all but, impossible.

As citizens living in New York, the hallow land at Ground Zero acts as a constant reminder that terrorists can and will attack at any given time, and can plan, mount, launch and successfully carry out a successful attack on US infrastructure targets. The NRC cannot refute the very real fact that a large commercial aircraft commandeered by terrorists flew right past the twin domes of Indian Point on September 11th, 2001 on its journey to crash into the Twin Towers in Manhattan.

B) The aftermath and significant impacts on the environment should the Emergency Evacuation Plan for Indian Point fail to function as envisioned in the case of a significant incident or attack involving off site release of radioactive contaminants occur should also be a part of the EIS for IP2's LRA. The fact that the Emergency plan is a living fluid

document is NOT THE ISSUE, the issue is what happens, what are the environmental costs if the plan does not work, or function as envisioned, as was/is the case in the aftermath of Hurricane Katrina. See for example the Witt Report . We are not saying the Emergency Plan itself is in scope, but the aftermath of its failure and/or non workability are within scope of this process under the rules and guidance of NEPA.

The aftermath should the NRC's DBT, which dictates the security requirements and types of events that Indian Point must be capable of defending against in the case of a security breach of any type, including but not limited to A) a significant nuclear incident leading to a major release of radioactive contaminants, B) a terrorist attack, or C) a successful action by malcontent or sabotage is also within scope. The NRC may wish to remove security from the scope of this hearing, but NEPA demands that the possible failure of those systems or programs, such as security, and the environmental costs of their failure are within scope. The voluminous number of security breaches which have occurred at critical infrastructure, including nuclear weapons and power facilities after 9/11 (such as the 16 foreign-born construction workers who were able to gain access to the Y-12 nuclear weapons plant with falsified documentation) demonstrates that nuclear

“insiders” must be deemed potential active participants in an attack. In addition Indian Point is vulnerable to acts of sabotage against off-site power transmission, as was evidenced during the 2003 blackout which struck the Northeast. Various computer systems, at Indian Point, had to be removed from service, including the Critical Function Monitoring System, the Local Area Network, the Safety Assessment System/Emergency Data Display System, the Digital Radiation Monitoring System and the Safety Assessment System.

C) Again, the contents of the DBT, nor the fact that said DBT is a living, constantly changing document, are not the issue nor focus of NEPA and its requirements, but instead what is at issue, is the potential aftermath, if said DBT is found to be inadequate in scope and design.

These three examples are given, as they each would play a part in the aftermath of a terrorist attack at the Indian Point Energy Center located in Buchanan, New York.

6. NEPA’s intent and purpose is not in weighing the odds of and event occurring, but instead is intended to measure the risks and costs to the environment should such and event occur. In *San Luis Obispo Mothers*

for Peace v. NRC, 449 F.3d 1016, 1028 (9th Cir. 2006) the courts

Memorandum and Order in part states:

NRC's "categorical refusal to consider the environmental effects of a terrorist attack" in this licensing proceeding was unreasonable under the National Environmental Policy Act (NEPA).

It is abundantly clear in the Ninth District Court's ruling, that the odds of a given event are not at issue, but instead the issue is the effects such a postulated event or events would have on the environment. The Ninth Circuit Court Order made it abundantly clear that the NRC must take into consideration the environmental effects of a successful terrorist attack. The NRC had wrongfully attempted to narrow the scope of what will be included within their review based on the NRC's best guess estimates on the odds of such an event occurring.

It is pointed out here, large and small, that there have been 9,438 terrorists events around the world since September 11, 2001. Though most of these attacks were minor in scale and/or thwarted by authorities, the number of attacks speaks volume. The risk of a terrorist attack on a nuclear reactor site is a very real possibility.

NEPA requires the NRC and licensee to answer what are the environmental costs of a successful attack of a terrorist attack on a

Nuclear Reactor site, such postulated events should include, but not be limited to, evaluation of the risks associated with attacking various components of the facility independently and jointly, including for instance the reactor itself, the control room, the spent fuel pools, and the water intake and/or discharge channel, and the attack scenarios should include the attacking force of 9/11, which means scenarios and their aftermaths should include an attacking force of no less than 18 terrorists, the potential use of up to four large commercial airplanes.

Further, attacks should include use of known terrorists weapons of choice which include large vehicle bombs (such as the one used in the Oklahoma City Bombing orchestrated by home grown terrorist Timothy McVay), armor piercing munitions (used for instance by LA gangs and drug cartels), Shoulder launched rockets and grenades, and Semi-Automatic 50 Caliber Rifles (which can be accurate in hitting a target such as a guard tower from up to one mile away, and capable of doing extensive damage from a distance of up to four miles (if successfully hitting a target), and mortars.

***Sniper/Anti-Materiel Rifle:** 53 This weapon was developed by the U.S. military (M82A1) in the 1980s to destroy jeeps, tanks, personnel carriers, and other vehicles. The 28 lb. (12.7 kg) weapon saw extensive use in the Persian Gulf War where a single soldier could disable multiple vehicles in a matter of seconds. It*

fires 50 caliber (0.50 in [1.27 cm] diameter) ammunition and is considered one of the most destructive and powerful weapons legally available in the United States. The price of this weapon can range from \$4,000 to \$7,000.

This semi-automatic weapon can hit targets accurately one mile (1.60 km) away and can inflict effective damage to targets four miles (6.44 km) away (that is, if the round strikes the target). It can also fire specialized ammunition capable of piercing several inches of metal, exploding on impact, or providing tracers for accurate night shooting. In 1999, GAO investigators noted criminal misuse of 50 caliber weapons in connection with known domestic and international terrorist organizations,

Publicly available sources contain significant weapon capability information:

– U.S. Army's Field Manual FM 3-06.11 [B-1], Combined Arms Operations in Urban Terrain . Chapter 7 of this document is particularly useful and contains weapon penetration information. A wide selection of Army Field Manuals are publicly available for reference and download at www.adtdl.army.mil .

– The Worldwide Equipment Guide [B-2] serves as an interim guide until the publication of Army Field Manual FM 100-65, Capabilities-Based Opposing Force: Worldwide Equipment Guide is published. The Worldwide Equipment Guide is available for reference or download at www.fas.org/man/dod-101/sys/land/row/weg.pdf.

Rocket Propelled Grenade Launcher: The RPG-7 (which is shown below) is a very simple and functional weapon. It is a shoulder-fired, muzzle-loaded grenade launcher that launches a variety of fin-stabilized, oversized grenades from a 40 mm (1.57 in.) tube. It is effective against fixed emplacements, vehicles like tanks, and personnel. Its capability is dependent upon the type of grenade used. Using antitank grenades, its effective range is 500 m (0.31 mi) when used against a fixed target and 300 m (0.19 mi) when fired at a moving target. Its maximum range is 920 m (0.57 mi), at which point the round self-destructs after its 4.5-second

flight. The antitank round has a lethal bursting radius of 4 m (13.12 ft) when used on an area target. Using an antipersonnel grenade, the RPG-7 can be effective at 1100 m (0.6835 mi). A trained two-man team can fire 4–6 rounds per minute. The weapon is light enough to be carried and fired by a single individual.

Indian Point is vulnerable to water born attacks and aerial assaults. A meltdown can be triggered even at a scrammed reactor if cooling is obstructed. Water intake is also essential to the proper function of spent fuel pools. Yet at certain nuclear plants, cooling systems may be highly vulnerable. At both Indian Point and Millstone Power Station, in particular, water intake pipes have been identified by engineering experts as exposed and susceptible to waterborne sabotage.

In March 2005, a joint FBI and Department of Homeland Security assessment stated that commercial airlines are “likely to remain a target and a platform for terrorists” and that “the largely unregulated” area of general aviation (which includes corporate jets, private airplanes, cargo planes, and chartered flights) remains especially vulnerable. The assessment further noted that Al Qaeda has “considered the use of helicopters as an alternative to recruiting operatives for fixed-wing operations,” adding that the maneuverability and “non-threatening appearance” of helicopters, even when flying at low altitudes, makes them “attractive targets for use during suicide attacks or as a medium for the spraying of toxins on targets below.”

The vulnerability of nuclear power plants to malevolent airborne attack is detailed extensively in the Petition filed by the National Whistleblower Center and Randy Robarge in 2002 pursuant to 10 CFR Sec. 2.206. A number of studies of the issue are also reviewed in Appendix A to these Comments. The particular vulnerability of nuclear spent fuel pools to this kind of attack is detailed in the

January 2003 report of Dr. Gordon Thompson, director of the Institute for Resource and Security Studies entitled “Robust Storage of Spent Nuclear Fuel: A Neglected Issue of Homeland Security” and in the findings of a multi-institution team study led by Frank N. Von Hippel, a physicist and co-director of the Program on Science and Global Security at Princeton University and published in the spring 2003 edition of the Princeton journal Science and Global Security under the title “Reducing the Hazards from Stored Spent Power-Reactor Fuel in the United States.” It is worthy of note that, even post-9/11, general aviation aircraft have circled or flown closely over commercial nuclear facilities without military interception.

Contention is Within Scope in the License Renewal Process

NRC regulation 10CFR 51.53 which is the implementation and enforcement device created by the NRC to abide by the terms and regulations of NEPA demands that the environmental costs of ALL POTENTIAL AND/OR POSTULATED RISKS associated with a major agency action be considered in a Environmental Impact Statement, and further requires that citizens in the potentially affected community be given a chance to have public input into the process and creation of said EIS.

Further, a recent Ninth District Circuit Court Decision in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1028 (9th Cir. 2006) we find guidance on the issue at hand in the courts Memorandum and Order in which they state unequivocally:

NRC's "categorical refusal to consider the environmental effects of a terrorist attack" in this licensing proceeding was unreasonable under the National Environmental Policy Act (NEPA).

These two points should be sufficient to prove that this contention is within scope of the process. However, we go further in pointing out that the NRC has provided its own "in agency precedent" to include the potential effects to the environment should there be a successful terrorist attack on a NRC licensed facility. In the license review of an application from Pa'ina Hawaii, LLC., a Hawaiian-owned company, to build and operate an underwater pool-type commercial irradiator at a location near Honolulu International Airport, the NRC staff decided, of their own accord, to include and review the potential of a terrorist attack on the facility, and the resulting environmental effects should a terrorist attack be successfully launched on said facility during its period as a licensed NRC site.

NRC has both a legal and moral responsibility to treat all Stakeholders in a fair and equal fashion, in all regions of the country. The NRC has established a precedent of including the environmental effects of a terrorist

attack on a Licensee site as a part of the EIS in the license renewal process. A Ninth Circuit Court Decision instructed and ordered the NRC to include as a part of the EIS the environmental effects of a successful terrorist attack.

It is clear from the presentation of facts in this document that said contention is within the scope, and deserving of a closer review by the board.

Contention Raises a Material Issue of Fact or Law

Entergy is of the opinion that they are not required to include as a part of their LRA for IP2 the environmental effects of a successful terrorist attack on the Indian Point facility. NRC have exhibited a great reluctance to abide by the legal responsibilities laid out in NEPA, and the NRC's own regulation 10CFR 51.53, as is witnessed by a review of the 48 LRA's that precede the applications for IP2 LLC and IP3 LLC.

Although the commercial interests of the nuclear industry are of valid concern to nuclear utilities and the NEI; they should not be of concern to the NRC. There is no justification for jeopardizing national security and the health and safety of the public and violating NEPA - even to the smallest degree - to safeguard corporate profits.

The Ninth District Court decision, coupled with the NRC own precedent set in the licensing process for the Irradiation Facility in Hawaii shows there are material issues of both the facts and laws presented in this

contention. The Stakeholders of the host community surrounding Indian Point, hold a very different opinion on these facts than does the NRC. The attacks on our sovereign soil here in New York have shown us, proved to us that a terrorist attack is possible, and worthy of inclusion in the EIS for this license application.

Contention is Supported by Facts and/or Expert Opinion

Intervener has met the minimal requirements of the 10 CFR rules and regulations in presenting this contention in a concise statement of the facts adequate to establish that said contention is entitled to a further and complete review of the issues contained herein. It is pointed out that the rules governing the license renewal process, and hearings lay out some basic criteria that a stakeholder must meet to have a contention accepted for further review:

Section 2.309(f)(v) requires "a concise statement of the alleged facts or expert opinion which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the H petitioner intends to rely to support its position on the issue."

Additionally, it is pointed out that the rules and regulations dealing with hearings and contentions accepted therein goes further to define specifically

the minimum burden of proof necessary to have a contention accepted for further review and scrutiny:

An Intervener is not required to prove its case at the contention filing stage:

"the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality as that is necessary to withstand a summary disposition motion." Statement of Policy on Conduct of Adjudicatory Proceedings, 48 N.R.C. 18, 22 n.1 (1998), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989).

Rather, petitioner must make "a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate." In Gulf States Utilities Co., 40 NRC 43, 51 (1994), citing, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, Final Rule, 54 F.R. 33168, 33171 (Aug. 11, 1989).

It is clear here, that this contention more than meets the minimal standards necessary for acceptance of this contention. The petitioner in this case has made “a minimal showing that the material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate.”

Contention Raises a Material Matter of Fact or Law

1. NRC and PG&E refused to consider the effects on the environment in the case of a successful terrorist attack on the proposed Spent Fuel Facility at Diablo Canyon.
2. Mother's For Peace successfully litigated, and the Ninth Circuit Court handed down a Memorandum and Order that effectively and concretely established law stating that review of the environmental effects in the case of a terrorist attack are to be included in the EIS in a licensing procedure and/application.
3. NRC subsequently implemented a rewrite of the EIS in that licensing review to include (however inadequately) a review of the issues.
4. NRC set agency precedent when it voluntarily included the environmental effects of a possible terrorist attack in the EIS for the licensing of a irradiator facility in Hawaii.
5. FUSE, and the Stakeholders of the host community claim that NEPA's intent is clear, and that all possible risks and incidents and their potential effects on the environment must be reviewed and included in the scope and creation of the EIS for the IP2 LLC LAR.

The NRC cannot approved the Applicant's LRA because it does not address the realistic environmental risk posed by a terrorists attack. The Stakeholders

have raised a material matter of fact or law, thus meeting the burden for further review.

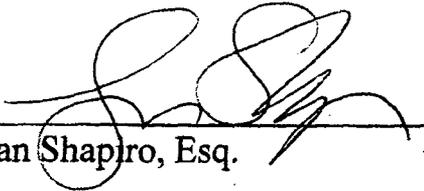
V. CONCLUSION AND REQUEST FOR RELIEF

Entergy's application should be denied by the NRC of the reasons stated above. Alternatively, FUSE seeks protection of its interests through an Atomic Safety Licensing Board (ASLB) Order requiring, as pre-requisite to issuance of new superseding licenses, that Entergy cure the inadequacies in its

application as described above so as to provide assurance of public health and safety. Further, FUSE requests that the Board order that, if and when Entergy curses the inadequacies in its application, Entergy shall then resubmit the relevant portions of its application with appropriate notice and opportunity for adjudication by the ASLB and the parties.

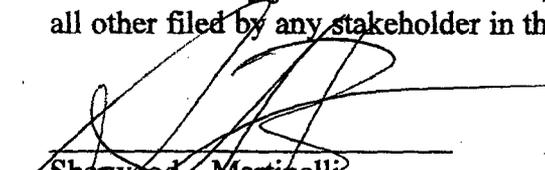
September 21, 2007 Friends United for Sustainable Energy, USA, Inc.

by:


Susan Shapiro, Esq.

Attorney for Friends United for Sustainable Energy, USA, Inc.

The undersigned, living within 20 miles of Indian Point 2, has read the above PETITION FOR LEAVE TO INTERVENE, REQUEST FOR HEARING, AND CONTENTIONS, submitted by Friends Untied for Sustainable Energy (FUSE), dated September 21, 2007, and individually join in said Petition, and incorporates the contents of said Petition and all other filed by any stakeholder in this license renew process as if fully set forth herein.

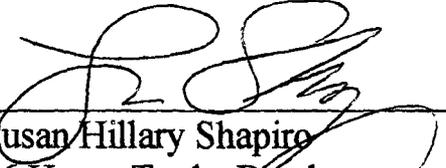

Sherwood Martinelli
351 Dyckman Street
Peekskill, New York 10566
Distance from Indian Point: 2.5

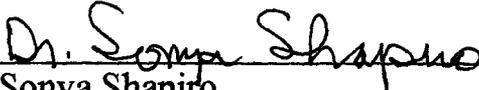

Witnessed and sworn to before
me this 21st day of
September, 2007

SUSAN HILLARY SHAPIRO
Notary Public - State of New York
No. 02SH6060466
Qualified in Rockland County
My Commission Expires June 25, 2011

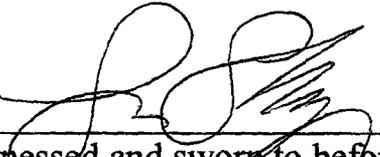
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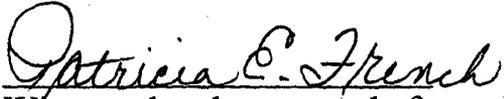

Robert Jones
124 Trails End
New City, NY 10956
Distance from Indian Point: 8.5

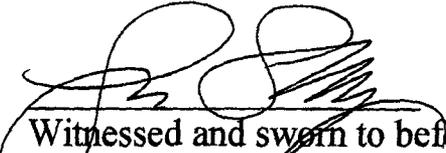

Susan Hillary Shapiro
36 Horne Tooke Road
Palisades, NY 10964
Distance from Indian Point: 17 miles

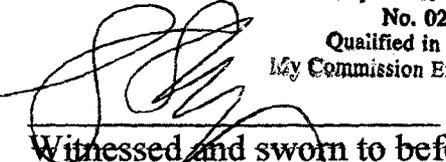

Sonya Shapiro
34 Scenic Drive
Suffern, NY 10901
Distance from Indian Point: 9 miles


Judy Allen
24 Seifert Lane
Putnam Valley, NY 10579
Distance from Indian Point 15 miles


Witnessed and sworn to before
me this 21st day of
September, 2007
SUSAN HILLARY SHAPIRO
Notary Public - State of New York
No. 02SH6060466
Qualified in Rockland County
My Commission Expires June 25, 2011


Witnessed and sworn to before
me this 21st day of
September, 2007
PATRICIA E. FRENCH
Notary Public, State of New York
No. 01FR5041486
Qualified in Rockland County
Commission Expires 04/03/07


Witnessed and sworn to before
me this 21st day of
September, 2007
SUSAN HILLARY SHAPIRO
Notary Public - State of New York
No. 02SH6060466
Qualified in Rockland County
My Commission Expires June 25, 2011


Witnessed and sworn to before
me this 21st day
September, 2007
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Notary Public - State of New York
No. 02SH6060466
Qualified in Rockland County