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OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of

Docket # 50-293

Entergy Corporation

Pilgrim Nuclear Power Station

License Renewal Application

March 17, 2008

**PILGRIM WATCH REPLY TO ENTERGY'S MOTION IN LIMINE TO STRIKE  
EXHIBITS AND TESTIMONY FILED BY PILGRIM WATCH, MARCH 10, 2008**

**PRELIMINARY STATEMENT**

Entergy has moved to exclude certain testimony and statements provided in support of the Initial Statement of Position and Rebuttal Testimony submitted by Pilgrim Watch [Entergy's Motion in Limine to exclude Pilgrim watch Testimony and Exhibits, March 10, 2008]. Entergy's motion is little more than an attempt to avoid a hearing on the central issues in this litigation by excluding testimony that is relevant, material and reliable to support Pilgrim Watch's contention.

**LEGAL STANDARD**

In NRC adjudicatory proceedings "[o]nly relevant, material, and reliable evidence which is not unduly repetitious will be admitted" [10 C.F.R. § 2.337 (a)]. Therefore the only question to ask concerning the items that Entergy and NRC Staff want "off the table" is whether or not the items in question are pertinent to assist the ASLB to determine if the Aging Management Program for buried pipes and tanks, and Pilgrim's supplemental inspections and tests performed as part of routine maintenance and operation, provide reasonable assurance that the effects of aging will be managed such that the buried pipes in the CSS, SSW Discharge and Off-gas systems will

perform their intended functions consistent with the current licensing basis for the period of extended operation and thereby protect public health and safety?

A Motion in Limine is meant simply to focus on excluding material that is not admissible – not pertinent to the issue. It is not an opportunity to argue the case; however in many respects that is what Entergy has attempted to do in their Motion in Limine.

## **BACKGROUND**

### **A. Scope**

**Entergy** says [at 3] that the, "...permissible scope of testimony offered by any party does not include the monitoring of radiological releases, the potential environmental consequences of such releases, or the mitigation thereof. Nor does it include the leakage events at other plants."

Pilgrim Watch disagrees. The permissible scope of testimony offered by any party does include the monitoring of radioactive releases as it indicates leakage from CSS, SSW discharge and Off-gas piping containing radioactive fluid. The permissible scope of testimony also includes the mitigation thereof so that Pilgrim shall operate within its CLB and comply with NUREG-1801, Section XI M34 Corrective Actions requirements over the extended license period. Pilgrim Watch does not disagree that the ASLB ruled potential environmental consequences of such releases were not in scope.

Contention 1 is very straight-forward. The license renewal program is designed to ensure that aging issues for passive components within scope do not pose a risk to public health and safety. Detection of potential leaks from passive components is logically part of the license renewal program.

Aging management is part of the re-licensing process for a simple reason – things are more likely to fail, or need repair, as they get older– and new procedures are essential to deal with potential aging problems.

Repair of known leakages has always been part of on-going operation.<sup>1</sup> But repair of known leaks and detecting whether there is or might be a leak are two quite different things. The requirement for an aging management program is to manage the increased risk of failure of aging components within scope - to insure leakage of an aging component will be detected, and that necessary preventative repair of an aging component will be accomplished.

Therefore in reply to Entergy, the scope of the testimony does include monitoring leaks - irrespective of the content of the liquid leaked from the buried pipes within scope. Only by monitoring - detecting - the leakage from these pipes can one assure that Pilgrim is operating within its CLB and complying with NUREG-1801, Section XI M34 Corrective Actions requirements over the extended license period. Aging management is all about detecting degradation and at an early stage before it impacts intended functions.

Last, if you ran Entergy's argument to its logical, or illogical, conclusion than there would not be any AMP for buried pipes containing radioactive liquids.

**Entergy:** Entergy claims [at 3] that the scope of the proceeding does not ... "include leakage events at other plants."

**Pilgrim Watch** disagrees. Leakage at other plants provides useful information for the Trier of fact for the following reasons. (a) Entergy and NRC Staff used industry practices/experience, in part, to justify the adequacy of their aging management program; therefore turnabout is fair play, and the ASLB should permit Pilgrim Watch to demonstrate and provide examples where industry practices/experience lead to a conclusion different from that claimed by Entergy. (b) It is basic to engineering and NRC practice to look for lessons learned at other reactor sites, instead of re-inventing the wheel. (c) The NRC Staff's SER says that there is limited experience at Pilgrim from which to learn and clearly there is no experience for reactors operating 40-60 years therefore it is relevant to look at examples, good and bad, at other sites.

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<sup>1</sup> 10 CFR 50, Appendix B, XVI; Appendix C, Article C.12, "Operability Leakage from Class 1, 2, and 3 Components" to NRC Inspection Manual Part 9900, Technical Guidance, Attachment to RIS 2005-20

## **Pre-hearing Disclosure Requirements**

Pilgrim Watch understands the importance of pre-hearing disclosure and will rely upon the materials provided by Pilgrim Watch and materials provided by the other two parties.

## **II. ARGUMENT**

### **A. The Board Should Not Exclude Any Testimony of Mr. Gundersen or Dr. David Ahlfeld Because Pilgrim Watch Made the Proper Disclosures Required**

Pilgrim Watch provided both Mr. Gundersen's and Dr. Ahlfeld's CV's that described their educational and professional experience. Based upon that, the ASLB accepted both into the proceedings as credible witnesses. They will be drawing upon their extensive professional experiences and any and all facts and evidence provided by the parties.

### **B. Dr. Ahlfeld's Testimony Should Be Included because it will Assist the Trier of facts and is Within the Scope of PW Contention 1**

Pilgrim Watch understands that the ASLB ruled that monitoring wells used to detect radioactive contamination and its potential impact on public health and safety is not relevant.

However, the capability or sufficiency of the aging management program to detect leaks is very much part of license renewal; and that is the sole and proper context that we are including monitoring wells. The fact that they also serve the public interest in protecting public health is an obvious additional benefit.

Pilgrim Watch also understands that managing the detrimental *effects of aging* is the purpose of license renewal aging management programs. Corrosion of buried pipes is a detrimental effect of aging; corroded pipes leak and break. We understand that Pilgrim's license does not allow broken and leaky safety equipment. Therefore their condition must be sufficiently monitored [this can be via inspections and monitoring wells] so that small leaks will be promptly detected before they grow to become big leaks – a time frame that we argue may take much shorter than once every 10 years.

Pilgrim Watch's task is to justify our contention that the AMP is not sufficient; one reason that it is not sufficient is that the AMP does not provide the capability to detect leaks at an early stage - therefore monitoring wells are a missing piece of the AMP.

We also recognize that 10 C.F.R. § 54.21(a)(3) requires that a license renewal application demonstrate, for each component within the scope of the license renewal rules, that the effects of aging are being adequately managed so that the intended functions will be maintained consistent with the current licensing basis during the period of extended operation.

Consistent with the CLB (Current Licensing Basis) for the period of extended operation means that Entergy is required to fully comply with its license and all NRC regulations. One requirement is to follow 10 CFR 50 Appendix B that requires the licensee to fix degradation. In order to fix degradation Entergy's aging management program must be sufficient to identify, or detect, leaks. An effective monitoring well program fits in appropriately here as an important adjunct to the AMP in order to make the program able to detect leaks of any size.

Further Entergy is asking the board to hold Pilgrim Watch to a different standard than they do for themselves. Entergy discusses their monitoring well program and their new BPTIMP framework in order to bolster their argument that the AMP and industry practices will provide assurance. However, Entergy argues that Pilgrim Watch is not supposed to comment on the inadequacy of their monitoring well program.

It is helpful to the board to understand that monitoring wells provide many functions and the most basic and important function is to detect leakage. Pilgrim Watch explained the basic engineering principles that leaks in buried piping cannot be assumed to be gradual, linear or predictable. These basic engineering facts underlie the importance of monitoring wells to this discussion. If you falsely believe that corrosion in buried piping is gradual, linear and predictable then you can cast aside the importance of detecting leaks when they first occur - but that is building a house on a faulty foundation. Second Pilgrim cannot satisfy 10 CFR 50 Appendix B from 2012-2032, fulfill their obligation to maintain the CLB, by simply failing to adequately look or to put it another way by not providing a robust inspection program supplemented by properly placed monitoring wells in sufficient number.

Entergy complains that radioactive groundwater contamination, like monitoring wells, is not admissible. Pilgrim Watch appreciates that the board determined groundwater contamination per se is not admissible if the focus is on its effect on public health and safety. However, if it is used as a marker of leakage than it properly should be on the table for the aforementioned reasons.

**C. Mr. Gundersen's Testimony Should be Included In its Entirety because Mr. Gundersen is Qualified; Bases His Testimony On a Correct Legal Standard; and His Testimony Will Assist the Trier of Fact**

**1. Mr. Gundersen Has Demonstrable Requisite Qualifications**

A Motion in Limine is not an opportunity to attack the credibility of the Intervenor's witness, which is exactly what Entergy's motion did; and certainly the tone of the attack seems overly harsh and inappropriate. Mr. Gundersen's and Pilgrim Watch's Testimony and Rebuttal has clearly demonstrated that Entergy's argument rests on a foundation of false assumptions; and once those false premises are exposed by a qualified engineer who fully understands both basic engineering/ chemistry principles and their application from his educational training and long experience, then all that follows from Entergy's false premises collapses.

Mr. Gundersen's CV speaks for itself. For example, he was the Senior Vice President of an ASME III and ASME IX Inspection Division that did inspections on tens of thousands of welds and tens of thousands of lineal feet of pipe at nuclear power plants. As a reliability supervisor, Mr. Gundersen improved the reliability of coal plants as old as 60 years; and in his decommissioning work, he dismantled old plants, including the underground components gaining familiarity with problems of corrosion and detecting leaks after the fact. At the heart of this contention is what happens to old pipe in a corrosive environment. Mr. Gundersen has extensive experience examining old pipes in nuclear plants, coal plants, tanks, and pipelines (including nuclear ASME III and IX and B-31.1 and non-nuclear applications ASME VIII). Entergy and NRC appear to wish to divert attention away from the basic engineering principles of corrosion and what is required to properly examine the buried piping under consideration.

Entergy criticizes Mr. Gundersen's reliance on supporting his statements of fact with "in my professional opinion" or words to that effect and not providing a detailed factual bases. His professional opinion stands on its own in consideration of his extensive experience. If Entergy or NRC Staff wishes to delve deeper into the bases of his professional statements they are given the opportunity in the process. They may file for cross-examination or submit questions for the board to ask Mr. Gundersen. A claim of "not sufficient bases" should not be decided on the basis of Motions in Limine rather during a fair hearing.

The factual basis that sufficiently supports his statements is found in the text of Pilgrim Watch's Preliminary Statements, Rebuttal and Exhibits filed by all parties. It is not surprising that the Exhibits are largely comprised of Entergy's and NRC's own documents. There is a simple reason that this is so, they are free. Whereas Entergy's and NRC's experts are either on Entergy's or NRC's payroll, Pilgrim Watch's expert is on Pilgrim Watch – an unfunded group with no money. For Entergy and NRC's experts, providing testimony is simply part of their 8-hour paid day job – time and money are not a deciding factor. This is not the case for Pilgrim Watch because we have no funding; and there is no funding provided by NRC for the public or public interest groups once admitted as Intervenors to use in order to help level the playing field. The ASLB must appreciate this fact and we, too, appreciate that this makes the board's job more difficult.

Mr. Gundersen's familiarity with the design of the plant comes from documents on record and we can assume that the ASLB will ask Entergy questions submitted by Pilgrim Watch to further both our and the Trier of facts understanding. It is true that Mr. Gundersen has not been digging in Pilgrim's backyard to inspect the piping; but it is unfortunately clear that Entergy has not done much digging, either.

## **2. Mr. Gundersen's Testimony Is Relevant Because It Is Based On A Legal Interpretation of Reasonable Assurance**

Contrary to Entergy, Pilgrim Watch contends that Motions in Limine are not the time or place to argue a case. The board will have the opportunity to discuss the issue of what constitutes reasonable assurance at the hearing.

Entergy tries to cast a shadow prematurely on the validity of this legal interpretation by stating [at 12] that “PW’s argument concerning the meaning of reasonable assurance, at pages 5-10 of its Statement of Position , is lifted verbatim from...Oyster Creek...” but they fail to note that it was properly footnoted. Later in the paragraph Entergy complains, “PW fails to inform the Board that the argument was rejected in the Oyster Creek license renewal proceeding...”; however that reference was unnecessary because Judge Abramson sat on Oyster Creek’s ASLB panel.

**D. Mr. Gundersen’s March 6 Testimony is Proper and Deserves Inclusion**

Mr. Gundersen’s Testimonies were properly submitted.

**E. The Portions of Mr. Gundersen’s Testimony That Entergy Wishes Excluded Should Remain. They include the following:**

**1. Mr. Gundersen’s Testimony Includes a Legal Opinion Yet to be Determined as Admissible or Inadmissible by the Board**

Once again Entergy appears to misunderstand that Motions in Limine are not the time or place to argue a case. The board will have the opportunity to discuss the issue of what constitutes reasonable assurance at the hearing.

Entergy’s complaints imply that only lawyers can speak to, or understand, what laws may or may not apply and their meaning. If this were true, Pilgrim Watch could not even be here because we are not represented by legal counsel. Because pro se representation is allowed; it follows that Mr. Gundersen has an equal right to an opinion on this topic.

**2. Mr. Gundersen’s Testimony is Relevant and within Scope**

Once more, Entergy is misusing the Motion in Limine to argue this case.

a. Groundwater monitoring: The requirement for an aging management program is to manage the increased risk of failure of aging components within scope - to insure leakage of an aging component will be detected, and that necessary preventative repair of an aging component to prevent a leak will be accomplished. Detection can be accomplished in a variety of ways – visual, UT, smart pigs, pressure testing, monitoring wells, discovery of contaminants nearby or whatever. A Motion in Limine is not the place for this argument; it belongs at the hearing – which for some reason, Entergy wishes to avoid.

The BPTIMP was put on the table by Entergy. They included it as Exhibit 5. Do they want to take it away? No matter how they wish to “sell” it; once Pilgrim’s specific BPTIMP is effectuated, it will serve as a detection system (tool) to provide information regarding leakage. It is that function – detection of leakage - that is pertinent here.

b. Leakage at other plants: Again, Entergy is improperly arguing their case. (a) Both Entergy and NRC Staff used industry practices/experience, in part, to justify their view that the aging management program is adequate; therefore turnabout is fair play, and the ASLB in fairness should allow Pilgrim Watch to demonstrate, and provide examples, where industry practices/experience lead to a different conclusion. (b) It is basic to engineering and NRC practice to look for lessons learned at other reactor sites. (c) The NRC Staff’s SER states that there is limited experience at Pilgrim from which to learn and clearly there is no experience for reactors operating 40-60 years so that it is important and relevant to look for examples, good and bad, at other sites.

Entergy complains in this section that Mr. Gundersen does not provide detail. Entergy misunderstands that Pilgrim Watch is not required to prove our case prior to the hearing.

c. Tritium Measurements at Pilgrim: Entergy asks to remove references to the discovery of Tritium in Pilgrim’s newly installed 4 monitoring wells. Certainly the incident is relevant and should be as admissible because it provides added information to Entergy’s and NRC’s short list of site specific experience.

Second, the fact that they do not know where the leak came from points to inadequacies in Pilgrim Station’s current prevention and detection programs.

Third, it would be unwise to take it off the table prematurely in the off chance that the source of the leak may be discovered between now and the hearing and perhaps providing pertinent information.

d. Testimony Regarding Buried Tanks: It is correct that there are no buried tanks; however Mr. Gundersen, as Entergy's experts, used the term in the spirit of Buried Pipes And Tanks Inspection Program.

e. Testimony on VY's AMP: Industry experience was used by Entergy to justify their AMP; in similar fashion industry experience that points to a different conclusion should be fair game.

f. Testimony Regarding Potential Use Counterfeit and/or Substandard Parts: Contrary to Entergy's claim, potential use of counterfeit and/or substandard parts indeed could affect the aging of components under consideration. The GAO Report was already on record. Again this is another example of Entergy using a Motion in Limine to argue their case.

g. Offgas Piping: It is for the board to decide at the hearing whether or not to include the piping associated with the offgas system. Pilgrim Watch has repeatedly discussed the function of this system and how the piping could contain radioactive contaminated liquids beginning in *Pilgrim Watch's Reply to the Motion of Summary Disposition*, June 2007. Pilgrim Watch contends that the board's Order did not specify the quantity of radioactive liquid that had to be in the piping in order for it to be considered; and neither has Entergy pointed to any ASLB document specifying where this board specified/defined quantity.

h. Function of Pipes: The basic function of pipes, from an engineering perspective, is very much at issue here. The basic function of piping is to keep the contents isolated from the environment or to put it another way not to leak. The requirement for an aging management program is to manage the increased risk of failure of aging components within scope - to insure leakage of an aging component will be detected, and that necessary preventative repair of aging components will be accomplished. It is obvious that another important benefit of detecting and repairing leaks is to protect public health - although that associated benefit is not part of this hearing.

i. We are unclear what Entergy is driving at in their complaint that, “Mr. Gundersen’s Attack on the Board’s Questions Assumes Facts Not in Evidence or Irrelevant.” The Board’s question read, “...whether Pilgrim’s existing AMPs have elements that the buried pipes and tanks will not develop leaks so great as to cause those pipes and tanks to be unable to perform their intended safety function” [Memorandum and Order, LBP-06-23, 64 NRC 257, 315 (2006)]. And we know further that 10 CFR 54.21(a) (3) requires that, “...the intended functions will be maintained consistent with the current licensing basis during the period of extended operation.”

Therefore the issue of how much leakage, if any, is acceptable is a fundamental question that needs to be addressed during the hearing process. It appears that Entergy and NRC Staff feel that very large to unlimited leakage is acceptable; Pilgrim Watch disagrees. The ASLB will properly deal with this question at the Hearing and draw their conclusions.

Mr. Gundersen suggests that if the ASLB’s question is meant to imply that leakage is acceptable from these buried pipes from 2012-2032 then there appears to be a conflict with a requirement that Pilgrim must comply with the CLB. He explains that there are rules that require leaks to be fixed; and implicit in that, Entergy must have sufficient programs to look. At the Hearing we may learn that the ASLB is able to make exceptions for Entergy and allow them to ignore rules going forward and then somehow have Entergy remain in compliance with the CLB. However Mr. Gundersen noted that, “it was difficult to determine.” The hearing and the ASLB’s decision will provide clarity.

**A key point to address at the hearing is a serious and fundamental dispute that rests at the very heart of this contention.** Entergy claims incorrectly, at 28, that “The general concerns of leakage raised by Mr. Gundersen throughout his testimony are thus operational issues beyond the scope of license renewal.” In stark contrast Pilgrim Watch contends that, repair of known leakages has always been part of on-going operation;<sup>2</sup> however, repair of known leaks and detecting whether there is or might be a leak are two quite different things. The requirement for an aging management program is to manage the increased risk of failure of aging components

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<sup>2</sup> 10 CFR 50, Appendix B, XVI; Appendix C, Article C.12, “Operability Leakage from Class 1, 2, and 3 Components” to NRC Inspection Manual Part 9900, Technical Guidance, Attachment to RIS 2005-20

within scope - to insure leakage of an aging component will be detected, and that necessary preventative repair of an aging component to prevent and fix a leak will be accomplished.

Entergy either misses the point or they are overly, and unrealistically, optimistic. On page 29, Entergy says that, "Mr. Gundersen appears to assume that the Board's questions and the answers from Entergy and the NRC Staff somehow imply that leakage detected in the buried CSS and SSW piping would go uncorrected. Nothing in any of the responses to the Board's questions suggests that corrective action would not be taken if such leakage were detected. Indeed, both Entergy and the NRC Staff have testified that the Appendix B corrective action program applies to any degradation detected under the aging management programs for these components."

Pilgrim Watch's point is simple. The aging management program is insufficient to detect leaks so that they will be detected in a timely manner and fixed.

j. Entergy did not make clear the problem that they had with Mr. Gundersen's discussion of "pre-existing holes" [page 20, Mr. Gundersen's March 6 Testimony].

What he says makes perfect sense. He says that,

In addition, let me address the core question of whether or not the existence of holes will appreciably increase the likelihood of failure? That answer depends upon the cause and nature of the holes. A thousand pinhole leaks distributed uniformly over the length of a 1,000-foot buried piping run is unlikely to cause its failure rate to rise. But the same area of through-wall leakage concentrated in one region - such as in a circumferential weld - might create an entirely different outcome. If Entergy knows that buried underground piping is leaking (for example by observing small, slow level drop in the CST), how would Entergy distinguish from that fact the cause and nature of the leakage? Entergy certainly could excavate the piping and eyeball whether or not the leak has been created

by a series of pinhole leaks or a gaggle of weld defects. However, no licensee would excavate piping, determine the cause and nature of said holes and leaks, and not fix them, as such degradation would negatively impact performance and earnings. Besides, there is a federal regulation (10 CFR 50 Appendix B) that requires licensees to repair any degradation. Thus, by regulation, a licensee is not allowed to know about piping degradation and ignore it.

Entergy's complaint in this section actually makes our point. Entergy says that, "...there is no evidence in this proceeding that there are pre-existing holes" [Entergy Motion in Limine, 29]. Pilgrim's knowledge is limited (SER discusses limited experience) so whether there are or are not leaks is anyone's guess. We note that as soon as they installed a couple of monitoring wells, tritium was discovered.

k. Misapplication of Gall Report section: A correction we expect is allowed; and more to the point, both the one time inspection from 2012-2032 (XI.M32) and the one time inspection prior to license extension, 2002-2012 (XI. M34) share many of the same deficiencies that properly were provided in Pilgrim Watch's Prefiled Statement and Rebuttal and will be discussed in the Hearing.

#### **F. Testimony Incorrectly Claimed by Entergy to lack a factual basis**

1. In section F, Entergy asserts that Mr. Gundersen's testimony contains many assertions and opinion statements for which he has failed to adequately state and explain a factual basis and thus rendering the testimony inadmissible. We disagree for the following reasons.

a. Mr. Gundersen begins many of his statements of fact with "in my professional opinion", or words to that effect. His professional opinion stands on its own in consideration of his extensive experience. If Entergy or NRC Staff wishes to delve deeper into the bases of his professional statements they are given the opportunity in the process. They may file for cross-examination or

submit questions for the board to ask Mr. Gundersen. A claim of “not sufficient bases” should not be decided on the basis of Motions in Limine rather during a fair hearing.

b. And as stated above, the factual basis that sufficiently supports his statements is found in the text of Pilgrim Watch’s Preliminary Statements, Rebuttal and Exhibits filed by all parties. It is not surprising that the Exhibits are largely comprised of Entergy’s and NRC’s own documents. As stated above, there is a simple reason that this is so, they are free. Whereas Entergy’s and NRC’s experts are either on Entergy’s or NRC’s payroll, Pilgrim Watch’s expert is on Pilgrim Watch – an unfunded group with no money. For Entergy and NRC’s experts, providing testimony is simply part of their 8-hour paid day job – time and money are not an issue. This is not the case for Pilgrim Watch because we have no funding and there is no funding provided by NRC, as we believe there should be, for the public or public interest groups once admitted as Intervenors to use in order to help level the playing field.

c. In an operating license proceeding, the licensee generally bears the ultimate burden of proof. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), ASLB-697, 16 NRC 1265, 1271 (1982), citing 10 CFR 2.325.

2. The specific examples that Entergy discusses that supposedly “lack a factual basis” properly belong in the record. Mr. Gundersen is qualified to speak on these issues based on his professional experience and the record contains ample factual materials from which to draw.

a. Baseline review: This is a fundamental engineering term and fundamental to managing corrosion. Mr. Gundersen looks forward to discussing this subject April 10 with either the ASLB or Entergy. Clearly if Entergy does not perform a baseline review prior to re-licensing in order to determine the status of corrosion, they will be unable to (1) properly determine the appropriate frequency of inspections and sampling locations; and (2) they will be unable to determine a corrosion rate from subsequent examinations to re-examine the adequacy of their AMP. Before you buy a house, you have a qualified expert perform a home examination; before you buy a used car you test drive it and have a mechanic do a complete inspection.

b. Full examination of piping: As explained, it cannot be assumed that corrosion occurs evenly across the component. Therefore it is necessary to sample sections so that all sections are examined on a sequential and representative basis.

c. Adequacy of BPTIMP, not speculative: Mr. Gundersen bases his comments on his professional experience. The BPTIMP was introduced by Entergy, therefore they, too, believe that it is relevant, otherwise Entergy would not have been introduced it as an Exhibit.

d. Behavior of leaks: The behavior of leaks/corrosion is fundamental to this contention - a subject that Entergy appears to want to avoid. Entergy has built its' argument that the AMP is sufficient in large part on a foundation of false assumptions concerning corrosion. We know that if you start with false premises all that follows will be false.

They falsely assume, for example, that: corrosion is predictable, gradual and linear; manufacturing and installation errors do not exist or that if they do, they are readily apparent and identified by a sample; that components are manufactured uniform throughout; and Pilgrim's soil environment is known and not corrosive. Based on these false premises, Entergy incorrectly concluded that the AMP is sufficient. The AMP only requires a loosely specified one-time inspection sometime during the 10-year period prior to re-licensing and a one-time loosely specified inspection during the 10-year period after re-licensing, supplemented by inspections occurring by happenstance.

Once these basic engineering and chemistry principles are examined, not avoided, at the hearing, we believe that the ASLB will agree that the AMP is insufficient; and this we believe is the real reason that Entergy wants to avoid the discussion.

e. Bathtub curve, relevant: Engineers explain the aging phenomenon by using what is known as the "Bathtub Curve." It is fundamental. Further it explains why corrosion cannot be assumed to be gradual which is undoubtedly the true reason that Entergy wants it avoided.

f. Seismic issues, relevant: Plymouth is not immune to seismic activity even though the probability of such an event may be low. Buried pipes and tanks are not flexible and the coatings become brittle with age and therefore are more susceptible to breakage during seismic

events. Therefore it is important to have an adequate AMP to assure that the piping and wraps can withstand such an event.

g. Frequency and requirement for monitoring and inspections, relevant: Pilgrim Watch is mystified by Entergy's suggestion that monitoring and inspections are not relevant. Contention 1 is about the adequacy of the AMP – monitoring buried pipes for corrosion, leaks and breaks.

h. Cathodic protection, relevant: All metal piping corrodes, no metal is corrosion proof; cathodic protection is an important preventative measure. Therefore it is relevant. For example, this is a seaside community; we are around boats and boatyards. Therefore as non-engineers, we know that propeller shafts have a protective ring mounted on the stern to provide cathodic protection for the shaft. This is not rocket science.

i. Entergy's Disclosures, familiarity: Entergy accuses Mr. Gundersen of being totally unfamiliar with Entergy's disclosures. Pilgrim Watch suspects that this is simply meant to discredit our witness and at a level that should have no place in these proceedings.

**(G) Thru (I) Entergy Requests to Exclude all but (2) Exhibits**

According to Entergy, only (2) of Pilgrim Watch's Exhibits out of (26) submitted should remain. They include Exhibit 11 *Declaration of Alan Cox in support of Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 1*, June 5, 2007, at FN. 6, page 11; and Exhibit 14, Entergy's Prefiled Testimony, "Exhibit 5." Further Entergy argues [at 1] that neither witness should be admitted so in effect they wish to eliminate Exhibits 1 and 2, also.

Pilgrim Watch's 26 exhibits include: (21) documents from either Entergy, NRC, Federal or State Government documents; (2) documents from Pilgrim Watch's two expert's - CV's/Testimonies; (2) Union of Concerned Scientist Published Reports; (1) Boston Globe article. The latter article references directly a US Geological Survey Report, and a professor from MIT and Boston College.

All Exhibits placed on record by the parties are on record and thereby available to all parties.

**G. Entergy's Request to Exclude All So-Called PW "Late-Filed Exhibits" Should Be Ignored**

The so-called new Exhibits filed were copies of documents referred to in Pilgrim Watch's January 29, 2008 filing. The ASLB then asked Pilgrim Watch to provide citations and that we assumed would include appropriate Exhibits, for the board's and other reader's convenience.

Pilgrim Watch's email communications with Zachary S. Kahn, Law Clerk with the ASLB, are of record and were sent to the Service List. They are dated: 2/22/2008/12:00PM; 2/22/2008/3:13PM; 2/25/2008/8:56 AM; 2/26/2008/5:34 PM.

The absurdity of Entergy's complaint is that these are NRC or Entergy's own documents.

The Exhibits Entergy requests removed include: Exhibit 3, 10 CFR 54.21; Exhibit 4, Transcript of ACRS Meeting; Exhibit 5, 10 CFR 50, Appendix B, XVI; Appendix C, Article C.12, "Operability Leakage from Class 1, 2, and 3 Components", to NRC Inspection Manual Part 9900, Technical Guidance, Attachment to RIS 2005-20; Exhibit 6, Safety Evaluation Report; Exhibit 7, Groundwater Contamination (Tritium) at Nuclear Plants-Task Force – Final Report, NRC, Sept 1, 2006; Exhibit 8, Risk Informed Assessment of Degraded Buried Piping Systems in Nuclear Power Plants; Brookhaven National Laboratory; US Nuclear Regulatory Commission; NUREG/CR 6876, June 2005; Exhibit 13, Topography source: Pilgrim Nuclear Power Station, Boston Edison Company, Docket No. 50-293, May 1972 –U.S. Atomic Energy Commission, Division of Radiological and Environmental Protection, Final EIS; Exhibit 15, United States General Accounting Office, Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, Nuclear Safety and Health Counterfeit and Substandard Products Are A Government Wide Concern, GAO/RCED-91-6, October 1990; Exhibit 17, The SER, 3-37, Exhibit 18, Gall Report (NUREG-1801, Rev 1, XI, M-96, September 2005, at 10.); Exhibit 19, Pilgrim in Appendix A.2.1.2.; and B.1.2 of the renewal filing Exhibit 20, BPTIP External Cox Decl. at ¶¶ 23-24; Exhibit 21, Davis DECL; Exhibit 21, OIG-07-A-15; Exhibit 23, Event No. 43882, Event Notification report, December 11, 2007; Exhibit 24, *Federal Register*, page 3812, Legacy Sites; Exhibit 25, approximate location Monitoring Wells, Document Provided by Entergy; Exhibit 26, Reports:

discovery in Pilgrim wells fuels debate, Boston Globe, December 20, 2007; Analysis Tritium Samples for Massachusetts Department of Public Health, December 5, 2007.

#### **H. Entergy's Request to Exclude All So-Called "Unsponsored Exhibits" Should Be Ignored**

Entergy requests that Pilgrim Watch Exhibits that are not sponsored by either of its testifying witnesses should be excluded from the record. Pilgrim watch objects. All exhibits are referred to in Pilgrim Watch's Prefiled Testimony and the Rebuttal testimony.

The Exhibits Entergy requests removed include: Exhibit 4, Transcript of ACRS Meeting; Exhibit 7, Groundwater Contamination (Tritium) at Nuclear Plants-Task Force – Final Report, NRC, Sept 1, 2006; Exhibit 8, Risk Informed Assessment of Degraded Buried Piping Systems in Nuclear Power Plants; Brookhaven National Laboratory; US Nuclear Regulatory Commission, NUREG/CR 6876, June 2005; Exhibit 10, U.S. Nuclear Plants in the 21<sup>st</sup> Century: The Risk of a Lifetime, by David Lochbaum, Union of Concerned Scientists. (May 2004); and "Using Reliability- Centered Maintenance as The Foundation For An Efficient And Reliable Overall Maintenance Strategy," National Aeronautics and Space Administration (NASA), 2001; Exhibit 12, Union of Concerned Scientists Issue Paper, Help Wanted: Dutch Boy at Byron (October 25, 2007); Exhibit 13, Topography source: Pilgrim Nuclear Power Station, Boston Edison Company Docket No. 50-293, May 1972 –U.S. Atomic Energy Commission, Division of Radiological and Environmental Protection, Final EIS; Exhibit 15, United States General Accounting Office, Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, Nuclear Safety and Health Counterfeit and Substandard Products Are A Government Wide Concern, GAO/RCED-91-6, October 1990; Exhibit 23, Event No. 43882, Event Notification report, December 11, 2007; *Exhibit 24, Federal Register*, page 3812, Legacy Sites; Exhibit 25, approximate location Monitoring Wells, Document Provided by Entergy; Exhibit 26, Reports: discovery in Pilgrim wells fuels debate, Boston Globe, December 20, 2007; Analysis Tritium Samples for Massachusetts Department of Public Health, December 5, 2007.

### **I. Entergy's Request to Exclude All So-Called "Irrelevant Exhibits" Should Be Ignored**

We disagree that the following so-called documents are "irrelevant." Our rationale is provided in the foregoing. The determination of relevancy should be made by the Board at the hearing. Again, a Motion in Limine is not the avenue to argue the case.

The Exhibits Entergy requests removed include: Exhibit 4, Transcript of ACRS Meeting; Exhibit 7, Groundwater Contamination (Tritium) at Nuclear Plants-Task Force – Final Report, NRC, Sept 1, 2006; Exhibit 8, Risk Informed Assessment of Degraded Buried Piping Systems in Nuclear Power Plants; Brookhaven National Laboratory; US Nuclear Regulatory Commission, NUREG/CR 6876, June 2005; Exhibit 10, U.S. Nuclear Plants in the 21<sup>st</sup> Century: The Risk of a Lifetime, by David Lochbaum, Union of Concerned Scientists. (May 2004); and "Using Reliability-Centered Maintenance as the Foundation For An Efficient And Reliable Overall Maintenance Strategy," National Aeronautics and Space Administration (NASA), 2001; Exhibit 12, Union of Concerned Scientists Issue Paper, Help Wanted: Dutch Boy at Byron, (October 25, 2007); Exhibit 15, United States General Accounting Office, Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, Nuclear Safety and Health Counterfeit and Substandard Products Are A Government Wide Concern, GAO/RCED-91-6, October 1990; Exhibit 16, *New England not immune to strong temblors and specialists say that a major event in only a matter of time*, Boston Globe, Bryan Bender, April 16, 2006; Exhibit 22, OIG Report; Exhibit 23, Event No. 43882, Event Notification report, December 11, 2007; Exhibit 24, *Federal Register*, page 3812, Legacy Sites; Exhibit 25, approximate location Monitoring Wells, Document Provided by Entergy.

### **III CONCLUSION**

For the foregoing reasons, the Motion in Limine should be denied in its entirety.

Respectfully submitted,

  
Mary Lampert

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Duxbury, MA 02332

**UNITED STATES OF AMERICA**  
**NUCLEAR REGULATORY COMMISSION**  
**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the matter of

Docket # 50-293-LR

Entergy Corporation

Pilgrim Nuclear Power Station

License Renewal Application

March 17, 2008

**CERTIFICATE OF SERVICE**

I hereby certify that the following was served March 17, 2008 by electronic mail and by U.S. Mail, First Class to the Service List: Pilgrim Watch Reply to Entergy's Motion in Limine to Exclude Pilgrim Watch Testimony and Exhibits

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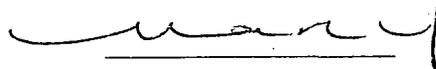
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