

July 6, 2007 (8:40am)

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  
Entergy Corporation  
Pilgrim Nuclear Power Station  
License Renewal Application

Docket # 50-293

July 6, 2007

**PILGRIM WATCH'S ANSWER TO NRC STAFF RESPONSE TO ENTERGY'S  
MOTION FOR SUMMARY DISPOSITION OF PILGRIM WATCH  
CONTENTION 1**

**Introduction**

On June 28, 2007, The NRC Staff filed a response in support of Entergy's Motion for Summary Disposition of Pilgrim Watch's Contention 1.

Pilgrim Watch under 10 CFR 2.710(a) responds; and for reasons stated below finds that no new facts or responses were provided by NRC Staff to justify granting Entergy's motion; the NRC Staff response largely summarizes points made by Entergy.

The reasons set forth in Pilgrim Watch's Answer Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 1, June 27, 2007 demonstrated that Entergy failed to show that a material dispute has ceased to exist or has been resolved since the Board's review of Pilgrim Watch's initial contention 1 and the Board's order of October 16, 2006 confirming existence of material dispute regarding Contention 1. Nothing in NRC Staff's response or the accompanying affidavit leads to a different conclusion. Genuine issues of material fact remain that warrant a hearing.

## Discussion

### 1. Legal standards Governing Motions for Summary Disposition – Pilgrim Watch

a. Under the Rules of Practice, 10 CFR Part 2, a motion for summary disposition should be granted if the Licensing Board determines, with respect to the question at issue, that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. 10 CFR § 2.749(d).

b. Under the concept of summary disposition (or summary judgment), the motion is granted only where the movant is entitled to judgment as a matter of law, where it is quite clear what the truth is and where there is no genuine issue of material fact that remains for trial. [Tennessee Valley Authority (Browns Ferry Nuclear Plant, Units 1, 2 & 3), LBP-73-29, 6 AEC 682, 688 (1973); Private Fuel Storage. L.L.C., LBP-99-23, 49 NRC 485, 491 (1999); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), CLI-O0-1 1, 53 NRC 370,384 (2001).

c. Summary disposition is a useful tool for resolving contentions that, after discovery is completed are shown by undisputed facts to have nothing to commend them, but it is not a tool for trying to convince a Licensing Board to decide genuine issues of material fact that warrant resolution at a hearing. Private Fuel Storage. L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497,509 (2001).

d. Once an applicant has submitted a motion that makes a proper showing for summary disposition, the litmus test of whether or not to grant the summary disposition motion is whether the Intervenor has presented a genuine issue as to any material fact that is relevant to its allegation that could lead to some form of relief. Georgia Power Company (Vogtle Electric Generating Plant, Units I and 2) LBP-94-37,40 NRC 288 (1994).

e. If there is any possibility that a litigable issue of fact exists or any doubt as to whether the parties should have been permitted or required to proceed further, the motion must be denied. General Electric Co. (GE Morris Operation Spent Fuel Storage Facility), LBP-82-

14, 15 NRC 530, 532 (1982); Safety Light Corn. (Bloomsburg Site Decommissioning and License Renewal Denials), LBP-95-9,41 NRC 412,449 n.167) citing Anderson v. Liberty Lobby. Inc., 477 U.S. 242, 248 (1986).

f. The party seeking summary judgment has the burden to show the absence of a genuine issue as to any material fact. Evidence must be reviewed in the light most favorable to the party opposing summary judgment. Advanced Medical Systems. Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993); Dr. James E. Bauer (Order Prohibiting Involvement in NRC Licensed Activities), LBP-95-7, 41 NRC 323,329 (1995).

g. Based on judicial interpretations of Rule 56, the burden of proof with respect to summary disposition is upon the Movant who must demonstrate the absence of any genuine issue of material fact. Private Fuel Storage. L.L.C.(Independent Spent Fuel Storage Installation), LBP-00-6,51 NRC 101, 112 (2000).

h. The Board's function, based on the filing and supporting material, is simply to determine whether genuine issues exist between the parties. It has no role to decide or resolve such issues at this stage of the proceeding. The parties opposing such motions may not rest on mere allegations or denials, and facts not controverted are deemed to be admitted. Since the burden of proof is on the proponent of the motion, the evidence submitted must be construed in favor of the party in opposition thereto, who receives the benefit of any favorable inferences that can be drawn. Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359,361 (1994).

i. Commission decisions affirm that a summary disposition opponent is entitled to the favorable inferences that may be drawn from any evidence submitted. See Sequoyah Fuels Corp. (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359,361, affd, CLI-94-11,40 NRC 55 (1994). This authority, however, does not relieve the opposing party from the responsibility, in the face of well pled undisputed material facts, of providing something more than suspicions or bald

assertions as the basis for any purported material factual disputes. Private Fuel Storage. L.L.C., LBP- 99-35, 50 NRC 180, 194 (1999).

j. If it appears from the affidavits of a party opposing the motion for summary disposition that the party cannot for reasons stated present by affidavit facts essential to justify the party's opposition, the Board may refuse the application for summary disposition or may order a continuance as may be necessary or just. See Rule 56(t) of the Federal Rules of Civil Procedure.

#### **1A. NRC Staff's Review of Legal standards Governing Motions for Summary Disposition**

NRC Staff stated that a moving party is entitled to summary disposition of a contention as a matter of law if the filings in the proceeding, together with statements of the parties and the affidavits, demonstrate that there is no genuine dispute as to any material fact [NRC Staff at 3]. Entergy set forth 44 Material facts. Pilgrim Watch disputed all but two of those facts – Material Fact 9 stated that the fuel oil system, and diesel generator system and fire protection system did not contain radioactive materials and Material Fact 37 stated the location of Pilgrim's spent fuel pool.

NRC Staff said that a party opposing a motion for summary disposition cannot rely on mere allegations or denials of the moving party's facts; rather, the non-moving party must set forth specific facts demonstrating a genuine issue of material facts [NRC Staff at 3]. Pilgrim Watch's answer to Entergy's Motion set forth specific facts in disputing Entergy's material facts; and supported their denials with references to NRC's and Entergy's documents and provided an affidavit from our technical expert. For example, Pilgrim Watch's responses to Entergy's Material Facts referenced: the Atomic Safety Licensing Board's Memorandum and Order of October 16, 2006; Entergy's Application; Section 9 of the Pilgrim Updated Final Analysis Report; PNPS's Groundwater Protection Questionnaire Response, Question 2, NEI, July 31, 2006; Entergy's letter to NRC, dated July 31, 2006; Dresden's letter to NRC dated July 28, 2006; NRC's Groundwater Contamination (tritium) at Nuclear Plants Task Force Final Report, September 1, 2006;

NRC Safety Evaluation Report with Open Items Related to the Renewal of PNPS, Docket No. 50-293, LRA Section B.1.2. Pilgrim Watch provided a factual discussion of the offgas system piping and salt water service system indicating conditions under which they may contain contaminated water; and Pilgrim Watch pointed to the location of water storage tanks questioning whether they may ever be used to contain radioactive contaminated water. No answers were provided. In addition, Pilgrim Watch submitted an affidavit by Dr. David Ahlfeld an expert in the field of groundwater flow and monitoring. Further because the Motion for Summary Disposition and NRC Staff's response raise primarily the same arguments as were raised by Entergy previously and NRC staff previously, Pilgrim Watch incorporates by reference its responses to Entergy's and NRC's previous arguments regarding the admissibility of Pilgrim Watch's Contention.

The facts provided by PW in response to the motion indicate that there is ample reason to hold a hearing.

**2. Scope of License Renewal Hearing.** The NRC staff, at 4-6, argues that the issue raised in contention 1 is not within the scope. They are revisiting an issue that has already been decided by the ASLB; and our understanding is that this is contrary to the concept that what has been already decided by the board governs this proceeding. In the ASLB Ruling on Standing and Contentions of Petitioners Massachusetts Attorney General and Pilgrim Watch October 16, 2006 at 62, the board stated that,

We turn first to the question of whether this contention falls within the scope of a license renewal proceeding. We agree with the Staff in its concession that Pilgrim Watch's first contention is within this scope, as defined at 10 C.F.R. Part 54.<sup>[247]</sup> Indeed, the fact that the Application itself contains sections concerning "Buried Piping and Tanks Inspection," both cited by Petitioner, indicates that Entergy implicitly agrees that this subject, insofar as it concerns those buried pipes and tanks in its aging management program, is within the scope of license renewal.

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<sup>[247]</sup>See our discussion above at section IV.B of this Memorandum and Order.

And the ASLB, at 63, ruled that the issues raised were material

With regard to whether, as required at 10 C.F.R. § 2.309(f)(1)(iv), the issue raised in the contention is material to the findings that must be made to support the sought license renewal, we find that this requirement has been met. Obviously, the adequacy of the aging management program as it relates to underground pipes and tanks has health and safety significance<sup>[251]</sup> and is material to whether the license renewal may be granted

### **3. NRC Staff argues incorrectly that there are no Material Facts in issue.**

Pilgrim Watch answered Entergy's motion and factually demonstrated the basis for dispute of 42 of Entergy's 44 material facts. The facts provided by PW in response to the motion indicate that there is ample reason to hold a hearing. NRC staff provides nothing new.

NRC Staff argue at 7 that monitoring for radioactive leaks is outside the scope of license renewal. Once again NRC Staff is revisiting an issue already decided. In the ASLB Ruling on Standing and Contentions of Petitioners Massachusetts Attorney General and Pilgrim Watch October 16, 2006 at 66, the board stated that,

We would also note that the subject of "monitoring" is not irrelevant merely because some monitoring may be part of operational activities on a continuing basis. The fact that some "monitoring" may occur as part of ordinary plant operations does not exclude it from license renewal, as illustrated, for example, by section A.2.1.10 of the Application, concerning the "Diesel Fuel Monitoring Program."

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<sup>[251]</sup>See *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 89 (2004); *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998), *aff'd in part*, CLI-98-13, 48 NRC 26 (1998).

**4. The NRC Staff at 8 make a broad brushed statement that there is no basis to find the AMPs inadequate.** In contrast, Pilgrim Watch submits that the aging management program is inadequate as it stands; and to better protect public health and safety the AMPs need to be supplemented with more frequent inspections and a groundwater monitoring system.

NRC Staff's expert, Mr. Davis, offers support to our contention. Davis states at 15 that,

“...industry practice has shown that properly applied coatings will prevent corrosion *as long as* the soil is not extremely aggressive (as Entergy states is not the case at Pilgrim) or *unless there is damage during application of the coating and handling of the pipe.*” [Emphasis added]

We know that human error is always a factor that needs to be addressed. Coatings may not always be properly applied. Davis warns that damage may occur during application of coating and handling of the pipe. This is Pilgrim Watch's point – damage could have happened at Pilgrim and gone undetected or could happen in the future. Last, we note that Davis relied on Entergy's self assessment of the soil; NRC does not indicate otherwise nor does the staff define what the qualitative term “extremely” actually means.

**5. The NRC Staff at 8 state that, “The AMPs are consistent with NRC guidance and with the Gall report” in order to support their contention that there is no basis to find the AMPs inadequate.**

The fact that the AMPs are consistent with NRC guidance and with the Gall report does not provide reason to regard the AMPs as adequate. In point of fact, the NRC Groundwater Contamination (Tritium) at Nuclear Plants-Task Force – Final Report, Sept 1, 2006<sup>1</sup> stated in the Executive Summary ii, that,

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<sup>1</sup> The Liquid Radioactive Release Lessons Learned Task Force (LLTF) was established by the NRC Director of Operations on March 10, 2006, in response to incidents at Braidwood, Indian Point, Byron and

“The task force did identify that *under the existing regulatory requirements* the potential exists for unplanned and unmonitored releases of radioactive liquids to migrate offsite into the public domain undetected.”

For example, the LLTF questioned the maintenance rule [LLTF consolidated recommendations list at B-1]

(14) The staff should assess whether the maintenance rule adequately covers SSCs [structures, systems, components] that contain radioactive liquids.

This says to Pilgrim Watch that the LLTF determined that current rules, guidance, maintenance practices need to be looked at again and cannot simply be relied upon for assurance - as the NRC Staff and their expert appear willing to do.

For example, the staff's expert affidavit at 15 states, “Material fact 20 states that preventative measures were employed at Pilgrim for buried pipes and in accordance with standard industry practice for installing coatings and wrappings. During the audit and

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Dresden related to unplanned, unmonitored releases of radioactive liquids into the environment. The scope of the task force work included reviews of industry experience, associated public health impacts, the NRC regulatory framework, related NRC inspection and enforcement programs industry reporting requirements, past industry actions following significant releases, international perspectives, and NRC communication with public stakeholders. The focus of the Task Force was on releases of radioactive liquids that were neither planned nor monitored. The findings have a direct bearing on Pilgrim Watch's contention.

review, I reviewed the external coatings and wrappings procedures and found that they follow standard industry practice.”

However Pilgrim Watch finds little comfort that measures employed at Pilgrim were “in accordance with standard industry practice.” It appears that reactors with offsite leaks apparently used standard industry practice, too; because NRC Staff does not provide evidence that all of the reactors with unmonitored offsite leaks had been subsequently cited for violating pertinent NRC rules and standard practices.

For example, the LLFT looked at Dresden at 26 and noted that,

The licensee suspects that the current leak is from 100 feet of piping. The piping is listed by the licensee as Augmented Quality under the Exelon quality assurance program. The piping is designed to meet ANSI B31.1 standards. The piping is wrapped to provide protection from corrossions and electrolysis. The required installation testing includes hydro-testing and visual inspection.

The LLFT concluded, 3.2.2.3 Conclusions

“Systems or structures can experience undetected radioactive leaks over a prolonged period of time. Systems or structures that are buried or that are in contact with soil, such as SFPs, tanks in contact with the ground, and buried pipes, are particularly susceptible to undetected leakage.”

“Leakage from components containing radioactive liquids may be reduced by the use of improved materials, the use of higher level consensus code repair/replacement requirements, improved quality assurance, improved design standards; improved and *expanded inspection requirements*, improved protection of buried components (galvanic protection and coatings) and/or improved design.”

Pilgrim Watch is not suggesting that the Dresden experience is exactly comparable to Pilgrim. In fact, because each reactor and reactor site are unique, the issue is more complex and warrants increased caution. However Dresden does illustrate that even if “they follow standard industry practice” - as NRC Staff’s expert James Davis claimed - that there is no assurance. The LLTF suggests that “standard industry practice” should be looked at and improved.

Further we note that the LLTF looked at problems in reactors operating under their first 40-year license period – not at reactors, like Pilgrim that will operate an additional 20 years and whose components will add an additional 10 years of operations until the next inspection.

The LLTF based their “lessons learned” only on a sample of reactors that have identified offsite leaks – not on reactors, such as Pilgrim, that may have unidentified leaks and would provide new lessons. The LLTF stated in their Executive Summary ii that,

...relatively low leakage rates may not be detected by plant operators, even over an extended period of time.

Leakage that enters the ground below the plant may be undetected because there are generally no NRC requirements to monitor the groundwater onsite for radioactive contamination.

Contamination in groundwater onsite may migrate offsite undetected.

It is important to recognize that the Task Force issued their report after the Gall Report. Any new lessons learned (conclusions and recommendations) in that report should apply to Pilgrim’s AMP analysis. The fact that, “The AMPs are consistent with NRC guidance and with the Gall report” – guidance and a report written before 2006 – clearly becomes less important.

**6. The affidavit at 24 states that “The staff reviewed the operating experience during the license renewal audits and did not uncover any occurrences of degraded buried piping containing radioactively contaminated water.”**

Pilgrim Watch assumes that the staff did not visually inspect the pipes from top to bottom rather relied on reports.

First, Entergy can only report what they know and again from the LLFT, “Contamination in groundwater onsite may migrate offsite undetected.”

Second, reports about leaks that Entergy knows about may not be complete. The LLFT spoke of this at B-1 and recommended that,

(5) Develop guidance to define the magnitude of the spills and leaks that need to be documented by the licensee under 10 CFR 50.75 (g). Also, clearly define “significant contamination.” Summaries of spills and leaks documented under 10 CFR 50.75 (g) should be included in the annual radioactive effluent release report (Section 3.2.1 and 3.4).

NRC has not made clear to the licensee what had to be documented; nor defined “significant contamination.”

Third, the LLFT discusses the limitations of monitoring and reporting requirements at 18-22. The limitations highlighted below show that it was not possible for NRC to have a clear and complete picture of PNPS’s history.

Regarding monitoring onsite, the LLFT states that,

BTP [The Branch Technical Division]...does not require ground water monitoring within the licensee’s site for general detection and monitoring purposes. Ground water monitoring within the licensee’s site is only required if the ground water is tapped for drinking or irrigation purposes [at 18].

Regarding monitoring offsite, the LLFT states that,

The radiation detection capabilities specified in the BTP are the 1970's state-of-the-art for routine environmental measurements in laboratories. More sensitive radiation detection capability exists today, but there is no regulatory requirement for the plants to have this equipment. The guidance primarily focuses on gamma isotopic analysis of environmental material and on tritium in water samples. There are minimal requirements for analyzing environmental samples for beta- and alpha -emitting radionuclides [at 18].

The regulatory guidance provides built in flexibility in the scope of the REMP. It ...allows licensees to reduce the scope of and frequency of the sampling program, without the NRC approval, on historical data ...if a licensee's environmental samples have not detected licensed radioactive material in several years, then the licensee typically reduces the scope and sample frequency of the associated environmental pathway. NRC inspections have observed reductions in the scope and frequency of licensee programs... [at 19].

Regarding reporting requirements, the LLFT states at 19,

No specific regulatory requirements for licensees to conduct routine onsite environmental surveys and monitoring for potential abnormal spills and leaks of radioactive liquids. However, 10CFR 50.72(g) requires that licensees keep records of information important to the safe and effective decommissioning of the facility. These records include information about known spills.

The key word is "known." The affidavit did not indicate whether NRC Audit Staff had access to these records or not; and if they did have access, whether they reviewed these records.

Pilgrim Watch concludes that there is no definitive historical experience to provide assurance. The statement that, "The staff reviewed the operating experience during the license renewal audits and did not uncover any occurrences of degraded buried piping containing radioactively contaminated water" is overboard.

More basic, we also know that the components in question are close to Cape Cod Bay; there are no monitoring wells to detect a leak; the inspection program involves either a visual inspection of an unspecified portion of the pipes or an untested UT inspection of an unspecified portion of the pipes once in ten years; the topography of the site is such that leaks would migrate into the Bay; and once in the Bay they are unlikely to be detected or ever recovered. Unmonitored leaks of radioactive contaminants into the Bay can place public health at risk by their bioaccumulation in marine life and entrance into our food supply or by their washing up on shore and becoming re-suspended by wind.

Entergy and NRC Staff's expert, James Davis, describe methods used to reduce the probability of pipes leaking- chemistry control, service water integrity program, wraps and coatings. However at reactor sites that have leaked, we assume that those reactors had in place a chemistry control program, service water integrity program , or wraps and coatings; NRC did not claim otherwise. Therefore the mere presence of those systems is not reason to grant Entergy's motion; or can we assume those systems are operating as designed and that human error has not, or will, not occur.

## CONCLUSION

In answer to NRC staff's response supporting Entergy's Motion for Summary Disposition, the staff did not offer any convincing evidence that the AMP, absent monitoring wells and additional inspections, is adequate to detect and remedy any corrosion or other potential for leakage, and any leakage that may actually occur, in a timely and effective manner. Genuine issues of material fact remain that warrant a hearing.

The basic issue is protecting public health and safety –assuring the integrity of the components and that they are functioning according to design. It seems clear that in order to effectively manage buried pipes and tanks requires two complimentary strategies - (1) reduction of the likelihood of leaks and (2) detection of any leaks. Methods to reduce the probability of the components leaking include chemistry control, service water integrity program, wraps and coatings. This is where Entergy and NRC staff are focused.

However, lessons learned indicate that, alone, they will not provide assurance without increased inspections and monitoring wells. The second strategy is detection. This is Pilgrim Watch's primary focus – supplement the AMP with increased inspections and monitoring wells. We do not see it as an “either/or” question - as Entergy and the NRC Staff seem to suggest. The LLTF states that there are areas of concern and uncertainty today; however we are not simply talking about today, we are looking at older components as they move deeper into the component wear-out phase from 2012-2032 – a concept discussed in our Motion to Intervene at 1.3.3.

Genuine issues of material fact remain that warrant a hearing.



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July 6, 2007

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

July 6, 2007

**CERTIFICATE OF SERVICE**

I hereby certify that the foregoing Pilgrim Watch Answer To NRC Staff Response To Entergy's Motion For Summary Disposition of Pilgrim Watch Contention 1 has been served this 6th day of July, 2007 by electronic mail and by U.S. Mail, first class to each of the following:

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