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UNITED STATES DISTRICT COURT
DISTRICT OF IDAHO

KEEP YELLOWSTONE NUCLEAR FREE, ENVIRONMENTAL DEFENSE INSTITUTE, MARY WOOLLEN, JOHN PEAVEY, DEBRA STANSELL,	)	Civ. No. 07-36-E-BLW
Plaintiffs,	)	
-against-	)	
THE UNITED STATES DEPARTMENT OF ENERGY, and SAMUEL W. BODMAN, SECRETARY, UNITED STATES DEPARTMENT OF ENGERGY,	)	
Defendants.	)	

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF PLAINTIFFS' RULE 59(e) MOTION TO ALTER JUDGMENT

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INTRODUCTION

Plaintiffs Keep Yellowstone Nuclear Free ("KYNF"), Environmental Defense Institute ("EDI"), Mary Woollen, John Peavey and Debra Stansell (collectively "Plaintiffs") submit this memorandum of points and authorities in support of their motion pursuant to F.R.C.P. 59(e) asking that the Court alter its Judgment dated October 30, 2007 (the "Judgment"). As set forth below, the Judgment, and the Court's Memorandum Decision also dated October 30, 2007 (the "Memorandum Decision"), are based on an error of fact that proved dispositive: that the Advanced Test Reactor ("ATR") had an originally-expected lifespan of more than 70 years, and that the Life Extension Program ("LEP") is intended to avoid a premature shutdown.

From its inception, the ATR had an originally-expected lifespan of 20 years. The DOE's "Aging Evaluation of the ATR Vessel Support Assembly" states: "Initial Design of the reactor and supporting equipment was generally based on an expected 20 year lifetime." AR 025913. More fundamentally, the four original ATR design specifications in the Administrative Record all state that the critical components of the reactor have a "design life" of 20 years or less. See AR 017156, 017185, 017208 and 017242.

In light of this and other record evidence more fully described below, Plaintiffs respectfully request that the Court reconsider its Memorandum Decision and alter its Judgment by granting Plaintiffs' motion for Summary Judgment, denying Defendants' motion for Summary Judgment, and directing the DOE to immediately prepare an environmental impact statement on the LEP, as required by the National Environmental Policy Act ("NEPA"). In the alternative, Plaintiffs ask that this Court vacate its Judgment and order that a hearing be held to determine the originally-expected lifespan of the ATR.

ARGUMENT

POINT I

STANDARD OF REVIEW

Plaintiffs recognize that reconsideration of a final judgment under F.R.C.P. 59(e) is an "extraordinary remedy" to be used sparingly for reasons of judicial economy and finality. Hoyle v. ADA County District Court, 2006 U.S. Dist. LEXIS 21265 (D. Idaho 2006). However, the Court has considerable discretion in considering a motion under F.R.C.P. 59(e). Turner v. Burlington Northern Santa Fe Railroad Co., 338 F.3d 1058, 1063 (9th Cir. 2003). Such a motion may be granted on any of four grounds, including where necessary to correct "manifest errors of law or fact." Hoyle v. ADA County District Court, 2006 U.S. Dist. LEXIS 21265. Here, reconsideration is necessary to correct an error of fact regarding the originally expected lifespan of the ATR. The Plaintiffs therefore respectfully ask that the Court exercise its broad discretion to alter its Memorandum Decision and the resulting Judgment.

POINT II

THE ORIGINALLY-EXPECTED LIFESPAN OF THE ATR WAS TWENTY YEARS

As set forth below, both the original design specifications for the ATR, and documents produced as part of a prior life extension program initiated (but never completed) in the late 1980s state that the design life of the ATR was 20 years.

A. The Original ATR Design Specifications Indicate a 20-year Design Life For Key Reactor Components

Design specifications for four critical components of the ATR are part of the Administrative Record. Those specifications were prepared prior to construction of the ATR in the early 1960s for Ebasco Services Corporation, the company that designed and built the ATR

for the DOE's predecessor, the Atomic Energy Commission.[1] They are: (1) ATR Specification for Primary Heat Exchangers; (2) ATR Specification for Reactor Vessel; (3) ATR Specification for Outlet Flow Pipe Assemblies; and (4) ATR Specification for Safety Rod Drive Mechanisms (the "Ebasco Design Specifications"). See AR 017150 to 017258. As set forth below, three of the four Ebasco Design Specifications state that the component has a 20 year "design life." The fourth gives a 10 year design life.

- The "ATR Specification for Primary Heat Exchangers" (Specification M-3) states: "The design life shall be a **nominal 20 years.**" AR 017156 (emphasis added). The specification states that it "covers performance and construction features of Primary Heat Exchangers." The Primary Heat Exchangers are critical to the safe operation of the ATR, as they facilitate the removal of heat from the reactor's core. According to Specification M-3 the completed heat exchangers were to bear an American Society of Mechanical Engineers ("ASME") Code Stamp "for operation at the design conditions stated herein." AR 017155 One such design condition was a 20 year design life. AR 017156. Specification M-3 was revised seven times, and approved as revised by the Atomic Energy Commission on December 10, 1965. AR 017152.
- The "ATR Specification for Reactor Vessel" (Specification M-130) states, under the heading "Design Life": "**Normal 20 years** for all metal parts exclusive of irradiation effects." AR 017185 (emphasis added). The reactor vessel, like the primary heat exchangers, is a critically important component of the reactor, and was to bear an ASME Code Stamp for operation at the "design conditions" stated in Specification M-130, including a 20-year design life. AR 017184. Specification M-130 was

1 The ATR was designed, specified and constructed by Babcock & Wilcox Company for Ebasco Services Incorporated. AR 011214.

revised nine times and the final revision was approved by the Atomic Energy Commission on September 2, 1964. AR 017174.

- The ATR Specification for Outlet Flow Pipe Assemblies (Specification M-103) gives the detailed specifications for the piping that carries primary coolant water away from the reactor core, again a critical component of the reactor. AR 017199 to 017215. Specification M-103 provides many details, including "expansion joint parameters" and states as their "Design Life": "2000 temperature and pressure cycles over **a twenty (20) year period**." AR 017208 (emphasis added). Specification M-103 was approved by the Atomic Energy Commission on January 11, 1963. AR 017200.
- Finally, the "ATR Specification for Safety Rod Drive Mechanisms" (Specification M-162) provides the design specifications for the emergency-shutdown safety rods, indispensable components of the reactor. In two places Specification M-162 states "The design life of the mechanisms shall be 10 years" (AR 017241) and "**Design Life: 10 years**." AR 017242 (emphasis added). Again, the "Design Life" is included under "Design Conditions and Requirements." Specification M-162 was approved by the Atomic Energy Commission on November 16, 1962. AR. 017217.

Thus, the original Ebasco Design Specifications for these critical components of the ATR specify a design life of 20 years or less. [2] There are no other design specifications in the Administrative

2 The Administrative Record also contains the "ATR Ebasco Design Manual" dated March 1964. See AR 017259 to 024915. Volume 21 of the Design Manual, entitled "Reactor Data" includes descriptions of numerous ATR components, experiments, and possible effects. With regard to the design life of ATR components, the Design Manual includes the following:

1. Reflector Blocks "Design Life": 1 year. AR 023765
2. Inner and Outer Flux Trap Baffles "Design Life": Five Years. AR 023779
3. Safety Control Rod and Flux Trap Fillers Component "Design Life": Three Weeks to Five Years. AR 023856

Record and no documents contemporaneous with the design and construction of the ATR that support a conclusion that its originally-intended lifespan was "indefinite," much less the 70-plus year lifespan the DOE now intends for the ATR.[3]

Notably, as stated in the NI PEIS prepared in 2000, the DOE's High Flux Isotope Reactor, a possible candidate reactor for the Plutonium-238 mission, also had a 20-year original design life. AR 005653 (stating that the HFIR had a "20 full-power year design life"). Like the ATR, the HFIR reached full-power operation in 1969, and like the ATR, life extension measures were necessary to extend its operation beyond its originally-anticipated 20-year operating life. The NI PEIS discusses those measures, including the installation of new safety equipment, initiation of a material condition surveillance program, and a power reduction. AR 005653-4. The NI PEIS further states "subsequent life extension programs can enable HFIR to provide support during the total 35-year evaluation period for operations." AR 005654. This demonstrates that a 20-year design life is by no means the exception for the DOE's large test reactors of that era. Rather, a 20-year life expectancy appears to have been the norm, and a life extension program, such as the LEP, is necessary to safely extend the operation of a test reactor beyond that initially-anticipated 20 year operating period.

B. The ATR Aging Evaluation and Life Extension Program Commenced in the Late 1980s Confirms That the ATR Was Designed for a 20-Year Operating Life

Consistent with the 20-year design life for various components set forth in the Ebasco

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4. Outer Shim Control Cylinders "Design Life": One Year. AR 023863

These reactor components are presumably replaced when they wear out.

3 The documents cited by the DOE to support an 'indefinite" lifespan, and those cited by the Court in its Memorandum Decision, are from 1988, 2000, 2003, and 2006. See Memorandum Decision at 2-3. They all express the DOE's aspiration to operate the ATR beyond its original design life of 20 years, and do not reflect the ATR's originally-intended lifespan.

Design Specifications, after 20 years of ATR operation, the DOE began, but never completed, an aging evaluation and life extension program for the ATR in order to determine if the DOE could safely continue to operate the reactor. That program was started in 1987 and was called the ATR Aging Evaluation and Life Extension Program (the "AELEX"). The first AELEX-related document in the Administrative Record is entitled "Development of An Aging Evaluation and Life Extension Plan for the Advanced Test Reactor" and is dated July 1987. AR 013416-013444. That document introduces the need for the AELEX program as follows:

> NR sponsors have requested that the ATR be operated through the year 2014 in support of NR irradiation programs. The **extended operation** would result in an approximately 45-year operating lifetime for the ATR and requires that an assessment be made of aging effects and that lifetimes be projected for the various ATR mechanical, electrical and structural components. In order to assure the continued safe operation of the ATR and in order to minimize plant unavailability due to age-related degradation, an aging evaluation and life extension program plan is being developed.

AR 013420 (emphasis added). Thus, the purpose of the AELEX, like that of the current LEP, was to try to ensure that it was safe to extend the operating life of the ATR beyond its originally-intended lifespan.

Several reports then generated pursuant to the AELEX are part of the Administrative Record and plainly state that the design life of the ATR as a whole, as originally designed, was 20 years. For example, the "ATR Reactor Vessel Internals Lifetime Scoping Analysis," dated May 1989 (AR 025468-025907) states as follows:

> The Advanced Test Reactor (ATR) first achieved full-power operation in August of 1969, nearly twenty years ago. The **original design life of various equipment at that time (including the reactor vessel) was twenty years of full-power operation.**

AR 025472 (emphasis added). Similarly, and even more conclusively, the "Aging Evaluation of the ATR Vessel Support Assembly" states as follows:

> The Advanced Test Reactor (ATR) at the Idaho National Engineering Laboratory began full power operation in August 1969 and has been operating successfully ever since. **Initial design of the reactor and supporting equipment was generally based on an expected 20 year lifetime.**

AR 025913 (emphasis added).

The AELEX was commenced because the ATR had at that time, now 20 years ago, reached or exceeded its originally expected operating lifetime. Thus, the stated purpose of the AELEX was to evaluate the safety and feasibility of extending the operating life of the ATR beyond its originally expected 20-year operating life to 2014, a 45-year operating life. AR 013420. However, due to funding constraints, the AELEX was never completed. AR 011323 (stating that the AELEX was "terminated due to funding constraints before the full benefits of the program could be realized."). The Administrative Record shows that Phases 1 and 2 of the program were completed, but Phase 3, during which "detailed assessments for life extension of the various plant components" were to be performed (AR 013671), was never completed, leaving the "residual life" of many critical reactor components undetermined. AR 01366-013687.

Thus, the stated goal of the AELEX, to ensure the safe operation of the ATR to 2014 and beyond, was never achieved. Yet, the reactor continues to operate to this day. Now, with the current Life Extension Program, the DOE has stated its intention to operate the ATR until 2040 and perhaps beyond, far exceeding the ATR's originally-expected lifespan.

CONCLUSION

The Court's Memorandum Decision stated that "KYNF is on solid ground when it demands that the DOE prepare an EIS before…extending the operations of the ATR beyond its expected lifetime." Memorandum Decision at 13. However, the Court concluded that the LEP "neither expands the current operation nor extends the originally-expected life span." Id. at 14.

It is clear from the citations above that the LEP is in fact intended to extend the operation of the ATR far beyond its originally-expected lifespan of 20 years. Plaintiffs therefore respectfully request that the Court vacate its Judgment granting the Defendants' motion for summary judgment, and enter judgment granting the Plaintiffs' motion for summary judgment. In the alternative, if the Court does not find the above citations conclusive, a hearing should be held to determine the original design life of the ATR and the Plaintiffs respectfully request that the Court vacate its Judgment and hold such a hearing.

Respectfully submitted,

Boise, Idaho
November 9, 2007

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