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IOWA CHAPTER

April 17, 2010

Chief; Rules, Directives, and Editing Branch
Division of Administrative Services
Mailstop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Duane Arnold Energy Center License Renewal

Dear Chief:

The following comments are submitted on behalf of the Iowa Chapter of the Sierra Club regarding the environmental impact statement for license renewal of the Duane Arnold Energy Center (DAEC) near Palo, Iowa. The Sierra Club has over 4,000 members in Iowa. We are concerned about and affected by energy policies that delay the transition to renewable energy sources. Relicensing DAEC will result in just such a delay.

The current focus on energy policy that relies on clean, safe and renewable sources makes it imperative that NRC evaluate the environmental impacts of nuclear power plants in a different way that has been done in the past. Our comments will address the DAEC EIS in this context.

Purpose and Need

The EIS sets forth the position of the NRC that the agency will not question the purpose and need for the project, but will instead leave that decision to State and local policy makers and the utility. This is an abdication of the NRC's duty under NEPA. The alleged purpose and need for the federal action must be adequately evaluated in order to properly undertake a cost-benefit analysis.

In the DAEC EIS there is no discussion as to what the alleged purpose and need is. Nor is there a description of a purpose and need in the environmental report submitted by DAEC in conjunction with the application for license renewal. It is our position that nuclear power is not the energy of the future.

Renewable energy and greater energy efficiency and conservation will address our energy needs. We have already seen significant decreases in the demand for energy, indicating that consumers are using energy more efficiently and obtaining it from renewable sources. There must be a discussion of the purpose and need for the DAEC license renewal in light of these facts.

Water Resource Issues

Another issue that we are concerned about is the impact on water resources. As described in Section 2.1.6.2 of the EIS, the Cedar River is the water source for the DAEC circulating water and service water systems. The nearby Pleasant Creek Recreational Reservoir is to supply water to the Cedar River during low flow. The EIS must examine the effect of license renewal on these water resources and the effect of other industries that affect the use and availability of water, especially the ethanol industry in Iowa. If these other industries draw down the water, including groundwater from the aquifer beneath DAEC and its surrounding area, the EIS needs to more thoroughly evaluate the effect of DAEC on water resources. The ethanol industry is currently in a slump in Iowa, but continued political pressure to have the United States be energy self-sufficient could result in the ethanol industry being rejuvenated, along with its heavy use of groundwater.

The EIS is also deficient in failing to determine the extent to which Pleasant Creek Reservoir has silted in, thus reducing its volume and the amount of water available for recharging the Cedar River. Although there was some discussion at the public information meeting in Hiawatha on March 31, 2010, about Pleasant Creek Reservoir and the small creek feeding into the reservoir, there needs to be a further review of the siltation since artificial lakes in Iowa are known to silt in from erosion runoff from adjacent land.

Waste Issues

We are also concerned about the environmental impact of the high-level radioactive waste from DAEC. There is absolutely no discussion of that in the EIS or the DAEC environmental report. This waste, primarily spent fuel, is now being stored on site at DAEC. Over the next 24 years if the license is renewed (4 years remaining on the current license and a 20-year renewal) the amount of spent fuel will be even more of a hazard. In order to

adequately discuss and evaluate the environmental impacts of the license renewal, the issue of high-level radioactive waste must be addressed.

This is a significant issue that needs to be addressed in light of terrorist efforts to acquire nuclear material.

Availability of Fuel

Depending on the source, it is estimated that there remains 30 to 50 years of economically recoverable uranium and that we have already reached peak recovery of uranium. At the same time, there are a number of new nuclear plants being proposed or in various stages of being licensed. It is possible that the fuel needed for the DAEC will run-out before the end of the license period.

The net effect of this is that the cost of power generation would increase significantly.

As the cost of uranium starts increasing when supplies begin to be significantly depleted, the cost of nuclear energy from this plant will increase. At some point the cost of power from this plant will become so great that the customers will no longer be able to bear the costs.

This may lead to a need for DAEC and its parent company to phase out this plant and to phase in alternative energy before the expiration of the license renewal period.

This scenario and the phase-out planning is not adequately addressed in the EIS. The EIS needs to address the effects of early retirement of DAEC, in light of increasing fuel costs.

It may be that nuclear energy becomes so costly that it must be abandoned, because consumers will not be able to absorb the cost. Alliant is asking the Iowa Utilities Board for its second rate increase in a year, with each rate increase being fairly significant. We are also aware that Alliant is currently in negotiations for a new purchase power agreement with DAEC and its parent company, to purchase the power generated after 2014.

A large percentage of the power generated by the Duane Arnold plant is sold, via a purchased power agreement, to Alliant (Interstate Power and Light). The customers who have been

receiving the Duane Arnold energy have been paying high rates, significantly more than the other two entities that were merged to form Alliant. The Iowa Utilities Board has force Alliant to equalize the power rates among the customers in the Alliant service territory, which has resulted in some significant rate increases for some of those customers.

Safety and Reliability

Although the EIS states that the 40-year license period that is generally allowed for nuclear power plants is based on economic and antitrust considerations, not technical limitations of the nuclear facility, the fact remains that 40 years is a long time for a facility as complex as a nuclear plant to operate without the danger of malfunctions and deterioration that can affect the safety and reliability of the plant. Adding another 20 years of use to the plant compounds the likelihood of safety and reliability problems. These issues need to be addressed in the EIS.

The likelihood of failure of parts will increase as the plant ages. Although there have been upgrades and replacement of some of the components of the plants, there is no refurbishment of the plant contemplated before the relicensing. We are concerned that a thorough review has not been made in this area.

There is a history of leaks of radionuclides from nuclear power plants in the United States. As of January of this year, there have been leaks at 29 plants in the United States, nearly a third of the plants in the United States. The EIS talks about design-based accidents and severe accidents, and mitigation alternatives, there does not seem to be a recognition of the likelihood of these accidents occurring. This is an issue that is not addressed more thoroughly in the EIS.

Evaluation of Alternatives

The EIS examines alternatives to relicensing DAEC. Aside from the no-action alternative which must be examined in every case, the EIS only examined three alternatives to relicensing. The first alternative was a supercritical coal-fired plant. Of course, that was an unacceptable alternative. The second alternative was a natural gas combined cycle fuel source. Because natural gas is not a renewable fuel and natural gas is

only a transition fuel at best, this alternative was not acceptable.

The third alternative was a combination of natural gas, conservation and wind. While this was a more acceptable alternative, it still relied on natural gas for over half of the power. A valid alternatives analysis would rely more heavily, if not exclusively, on renewable energy sources. This is especially true when we consider that the context of the analysis is a license renewal that would continue DAEC another 24 years into the future. In 24 years we will be relying almost exclusively on renewable energy. That should be the basis for the alternatives analysis.

Conclusion

Relicensing DAEC for an additional 20 years is a serious commitment to a technology that is expensive, environmentally troubling, and not consistent with our energy future. The EIS for the license renewal of DAEC does not adequately address the issues that would properly focus the impacts of nuclear energy in relation to more beneficial sources of energy. For the reasons stated in these comments, the EIS needs to be revised.

Very truly yours,

Sierra Club Iowa Chapter

By:

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