

October 12, 2007

MEMORANDUM TO: H. Brent Clayton, Chief
Environmental Technical Support Branch
Division of Site and Environmental Reviews
Office of New Reactors

William F. Burton, Chief
Environmental Projects Branch A
Division of Site and Environmental Reviews
Office of New Reactors

Richard P. Raione, Chief
Environmental Projects Branch B
Division of Site and Environmental Reviews
Office of New Reactors

FROM: Andrew J. Kugler, Senior Project Manager */RA/*
Environmental Projects Branch B
Division of Site and Environmental Reviews
Office of New Reactors

SUBJECT: TRIP REPORT - AUGUST 23 - 24, 2007, PRE-APPLICATION
READINESS ASSESSMENT (T-2) FOR A COMBINED LICENSE
APPLICATION AT THE GRAND GULF SITE

This report summarizes the staff's August 23 - 24, 2007, pre-application readiness assessment related to the environmental portion of a future Combined License (COL) application at the Grand Gulf site in Mississippi. The staff issued an Early Site Permit (ESP) for the site on April 5, 2007. System Energy Resources, Inc. (SERI) has indicated its intent to submit a COL application referencing the ESP late in 2007.

The purpose of this visit was to allow the staff to assess the readiness of the applicant's Environmental Report (ER), a key component of the COL application. The visit took place at the offices of the applicant's primary contractor, Enercon, in Kennesaw, Georgia. Enclosure 1 provides a list of attendees. Enclosure 2 is the agenda used during the visit. Enclosure 3 is a summary of the more significant issues that were identified related to the ER. In summary, the staff did not identify any issues related to the ER that would indicate it would not be ready by the planned date of application, although there are issues related to the interface between an ESP and a COL that need to be resolved. However, this was not a formal or comprehensive staff review and additional issues could be identified during the staff's formal review after the application is submitted.

CONTACT: Andrew J. Kugler, NRO/DSER/RAP2
(301) 415-2828

H. Clayton

2

The next pre-application activity in which the environmental staff will be involved will be a public information meeting. The date for this meeting has not yet been established.

Project No.: 744

Enclosures: As stated

H. Clayton

2

The next pre-application activity in which the environmental staff will be involved will be a public information meeting. The date for this meeting has not yet been established.

Project No.: 744

Enclosures: As stated

DISTRIBUTION:

PUBLIC

RENV R/F

RidsNroOd

RidsNroDserRap1

RidsNroDserRap2

RidsNroDserRenv

AKugler

ARedden

KBanovac

MWillingham

SCoffin

RKrieg, PNNL

EHickey, PNNL

DStapp, PNNL

ADAMS Accession No. ML072670036

OFFICE	PM:DSER:RAP2:NRO	LA:DSER:RAP2:NRO	BC:DSER:RENV:NRO
NAME	AKugler	ARedden	HBClayton
DATE	09/25/07	10/09/07	10/12/07

OFFICIAL RECORD COPY

List of Attendees
Levy County Readiness Assessment Visit (C-1)
August 20 – 21, 2007

NAME	AFFILIATION
Andrew Kugler	Nuclear Regulatory Commission (NRC)
Barry Zalcman	NRC
Kristina Banovac	NRC
Doug Bruner	NRC
Eric Oesterle	NRC
Tami Dozier	NRC
Darby Stapp	Pacific Northwest National Laboratory (PNNL)
Bill Sandusky	PNNL
Dave Anderson	PNNL
Amoret Bunn	PNNL
Steve Breithaupt	PNNL
Lance Vail (by phone)	PNNL
Tom Williamson	Entergy
Jerry Burford	Entergy
Jay Brister (by phone)	Entergy
Guy Cesare	NuStart
Marvin Morris	Enercon Services
Sam Damico	Enercon
Lori Evans	Enercon
Eric Praser	Enercon
Derek Richard	Enercon
Al Schneider	Enercon
Kim Stapleton	Enercon
Jim Hubbard	Enercon
Gabe Salamon	Enercon
Rachek Turney-Work	Enercon
Kevin Flanagan (by phone)	Enercon
Tom Moorer	Southern Nuclear Company (SNC)
Karen Patterson	SNC
Tony Banks	Dominion
Lynn Vanderpoel	Bechtel
Steve Frantz	Morgan Lewis

Grand Gulf Site Pre-Application T-2 Trip Agenda

Thursday, August 23, 2007

- 7:45 AM Coffee and sign in at Enercon offices in Kennesaw, GA
- 8:00 AM Welcome and Introductions – NRC, Entergy, NuStart, and Enercon
- 8:15 AM Overview of Grand Gulf project and Entergy/NuStart presentation of general issues
- 9:30 AM Breakout to technical groups; Start ER review
- 12:00 PM Lunch
- 1:00 PM Breakout to technical groups; Continue ER review; NRC begins meeting with corresponding applicant experts
- 4:45 PM End of day summary

Friday, August 24, 2007

- 7:45 AM Coffee and sign in at Enercon offices in Kennesaw, GA
- 8:00 AM Breakout to technical groups; Continue ER review; NRC meets with corresponding applicant experts
- 12:00 PM Lunch
- 1:00 PM* Wrap-up discussion on general issues; Summary and close-out
- 2:00 PM* Depart for airport

* Tentative schedule. Please note that more time may be needed.

**Summary of Issues Identified During
the U.S. Nuclear Regulatory Commission Staff Readiness Assessment
(T-2) Visit to the Grand Gulf Site in Mississippi
August 23 – 24, 2007**

The staff did not identify any issues related to the Environmental Report (ER) that would indicate it would not be ready by the planned date of application for the Combined License (COL). The COL will reference the Early Site Permit (ESP) for the Grand Gulf site that the staff issued on April 5, 2007. The applicant has chosen General Electric's "economic simplified boiling water reactor," or ESBWR, as the plant design. The most significant topics from the discussion are summarized below. The staff paid particular attention to issues that were not resolved in the ESP, and to notable changes that have been identified after the ESP was issued. Examples of the latter include the decision that new transmission lines are needed, an increase in the thermal power level of the plant, and a change in the location of the planned cooling towers.

Issues for a COL Referencing an ESP

The applicant is concerned that the staff may expect more detail in the COL application than is required by the regulations. The staff is concerned that the level of detail planned by the applicant may not be sufficient to support the review the U.S. Nuclear Regulatory Commission (NRC) staff is required to perform or to support necessary interactions with other agencies (e.g., consultation under the Endangered Species Act). For example, the regulations require that the applicant "demonstrate" that the proposed action fits within the plant design parameters and site characteristics from the ESP. Is simply providing a number a demonstration? The staff and the applicant discussed this issue at some length, but additional guidance is required to resolve it.

In some cases, information in the ER indicated an analysis had been completed based on the chosen reactor design and that the results were within the bounds of the Plant Parameter Envelope (PPE); the impact was considered small. However, a specific description of the analysis and results were not included in the ER. Without a basis, it isn't clear how the staff could determine whether the actual value is within the PPE value from the ESP. Similarly, there was frequent reference to activities during construction or operation that will follow "best management practices" or use of "best available technology." While the staff understands that the applicant may not be prepared to identify many of the technologies at this stage of the planning process, the staff feels that additional information would be needed for it to confirm that technologies do exist that will perform as described.

In at least some portions of the document, new information is provided, but there is no indication whether the applicant determined that the information was significant or not. The applicant indicated it will consider changes to improve clarity in this area.

Hydrology

There were two primary concerns identified by the staff in this area. The first involves the sole source nature of the Catahoula aquifer and information regarding the hydraulic isolation of the Catahoula aquifer from overlying formations. The other issue was that the applicant needs to document an adequate basis for estimating the effluent concentrations that will occur in the Mississippi River and not exclusively rely on the requirement for an NPDES permit to assert that the impacts would be small. The applicant is expected to initiate discussion with the

Environmental Protection Agency (or delegated agency) about the sole source aquifer and to explain the basis for the effluent concentrations.

Transmission Lines

In general, the process the applicant plans to use follows the Federal Energy Regulatory Commission requirements for impact assessment (to the grid, etc.). However, no environmental assessment is required by the State of Mississippi to site transmission lines. Half of the proposed 49 mile route affects undisturbed land either owned by Entergy Mississippi (EMI) or for which EMI has the right-of-way easements. This is roughly the corridor assessed in the original Final Environmental Statement (for Unit 1 construction. The remainder of the new route follows the existing Baxter-Wilson – Ray Braswell line and would require an expansion of that corridor. While the existing line was grandfathered at the creation of the Natchez Trace Parkway, the right-of-way expansion would need the approval of the National Park Service. The assumption by the applicant is that the lines would be buried to cross the Trace. This issue is likely to be an important one for the applicant to resolve.