



System Energy Resources, Inc.
1340 Echelon Parkway
Jackson, MS 39286-1995

CNRO-2004-00055

August 16, 2004

U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attention: Document Control Desk

DOCKET: 52-009

SUBJECT: Response to Request for Additional Environmental Information Related to
Early Site Permit Application (Partial Response No. 5)

- REFERENCE:
1. System Energy Resources, Inc. (SERI) letter to USNRC – Early Site Permit Application (CNRO-2003-00054), dated October 16, 2003.
 2. USNRC letter to SERI – Request for Additional Information Related to the Staff's Review of the Environmental Report for the Grand Gulf Early Site Permit (ESP) Application (TAC No. MC1379), CNRI-2004-00007, dated May 19, 2004.
 3. SERI letter to USNRC – Response to Request for Additional Environmental Information Related to Early Site Permit Application (Partial Response No. 3) (CNRO-2004-00047), dated July 22, 2004
 4. SERI letter to USNRC – Grand Gulf Nuclear Station Units 1 & 2 – Docket Nos. 50-416 and 50-417 - Mineral Rights/ Exclusion Area (AECM-87/0023), dated January 29, 1987

CONTACT:

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JDZ

DOCUMENT COMPONENTS:

One (1) CD-ROM is included in this submission. The CD-ROM contains the following three (3) files:

001_1_29_87_letter.pdf, 1943 KB, publicly available
002_Land Survey Composite Plat.pdf, 76 MB, publicly available
003_ER_Rev-1draft_08-13-2004.pdf, 119 KB, publicly available

In the referenced May 19, 2004, letter (Reference 2) the U.S. Nuclear Regulatory Commission requested additional information to support review of the SERI ESP Application. This letter transmits information as outlined in Attachment 1 to this letter and includes responses to:

S2.1-1, S2.1-2, E7.1-7 (revised)

Partial response to RAI's were provided in the Reference 3 letter. During the review and response preparation to similar requests for additional information to support NRC review of the SERI ESP SSAR, an error was noted in the Reference 3 submittal. This letter transmits revised information as outlined in Attachment 1 to this letter for Request E7.1-7 of the Reference 3 submittal.

Should you have any questions, please contact me.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on August 16, 2004.

Sincerely,



George A. Zinke
Project Manager
System Energy Resources Inc.

Enclosure: One CD-ROM

Attachment: Attachment 1

cc: Mr. R. K. Anand, USNRC/NRR/DRIP/RNRP
Mr. C. Brandt, PNL
Ms. D. Curran, Harmon, Curran, Spielberg, & Eisenberg, L.L.P.
Mr. W. A. Eaton (ECH) (w/o enclosure)
Mr. B. S. Mallett, Administrator, USNRC/RIV
Mr. J. H. Wilson, USNRC/NRR/DRIP/RLEP

Resident Inspectors' Office: GGNS

ATTACHMENT 1

SAFETY ANALYSIS REPORT, ENVIRONMENTAL ISSUES

Request:

S2.1-1 Section 2.1.2.3 of Site Safety Analysis Report (Mineral Rights). It appears that a minor share of mineral rights within the exclusion area are not owned or controlled by the applicant or related entities. Although exploitation or exploration of those rights “appears unlikely,” more information is needed. What is the exact ownership of the mineral rights in the exclusion area? What documentation can be provided to support the claim of a *de minimis* exception to total control of the exclusion area? As committed to during the site audit, this information should be docketed.

Response:

This subject was addressed by SERI in Cover Letter Reference 4 (the letter is attached to this response). The information provided at that time remains applicable to the SERI property and the ESP Application (Cover Letter Reference 1) with the following clarifications.

At the time, 10CFR100.11 was the applicable regulation; for the ESP Application 10CFR100.20 is the applicable regulation. SERI concludes the ESP Application is in compliance with 10CFR100. Some of the Mississippi State Code sections referenced have been updated since the letter was issued; however, the updates do not affect the letter’s conclusions. The referenced Mississippi codes can be viewed at <http://www.mscode.com/free/statutes/53/index.htm>. The geologist’s 1987 report attached to the letter concluded that drilling of exploratory wells in the foreseeable future (10 to 15 years) was not likely. Although the time frame ended in January, 2003, the conditions leading to the conclusion have not substantially changed; drilling of exploratory wells in the foreseeable future is still not likely.

The plat drawings contained in the January 1987 letter are difficult to read. Therefore, also attached to this response is a *.pdf file of the Composite Survey Plat dated 12/8/88

See files: 001_1_29_87_letter.pdf
002_Land Survey Composite Plat.pdf

Request:

S2.1-2 Section 2.1.2.3 of Site Safety Analysis Report (Mineral Rights). This section states “There is no activity at the GGNS plant site to explore for, drill for, or otherwise extract minerals. Past unsuccessful exploratory activities on or near the GGNS plant site and the geological character of the subsurface structure in the vicinity of the GGNS plant site indicate that commercial mineral production within or near the exclusion area appears unlikely in the foreseeable future. This has been confirmed in a geological appraisal, dated January 1987.” As committed to during the site audit, this information should be docketed.

Response:

See response to S2.1-1 above.

SECTION 7.1, DESIGN BASIS ACCIDENTS

Request:

E7.1-7 Table 7.1-1. This table summaries the resulting doses at the ESP site for postulated design basis accidents using the AP-1000, the ABWR, and the ACR-700 as surrogate reactor designs. Please update the table for each design basis accidents to include 1) AP-1000, ABWR, and ACR-700 x/Qs values and doses used for the EAB and LPZ, and 2) the ratios of site-specific x/Qs to design certification x/Qs used.

Revised Response:

The AP-1000 dose analysis used a ratio of the X/Qs to determine the GGNS offsite doses. For the AP-1000 design, the X/Q 's used are as listed below:

AP-1000 Atmospheric Dispersion Factors

Atmospheric Dispersion (CHI/Q) (Accident)	EAB=0.5 mi LPZ=2 mi
0-2 hr @ EAB	6.0 E-4 sec/m^3
0-8 hr @ LPZ	1.35 E-4 sec/m^3
8-24 hr @ LPZ	1.0 E-4 sec/m^3
1-4 day @ LPZ	5.4 E-5 sec/m^3
4-30 day @ LPZ	2.2 E-5 sec/m^3

The ABWR LOCA analysis also used a ratio of X/Q values to determine the equivalent GGNS offsite dose. The X/Q values used for the ABWR evaluation are as given below:

ABWR X/Q VALUES (sec/m^3)
[From ABWR SSAR Table 15.6-13]

	0 – 2 Hrs	0 – 8 Hrs	8 – 24 Hrs	24 – 96 Hrs	96 – 720 Hrs
EAB	1.37E-03				
LPZ		1.56E-04	9.61E-05	3.36E-05	7.42E-06

The GGNS site specific X/Q values used for the ESP are given in the ER in Section 2.7.6.2.

See file: 003_ER_Rev-1draft_08-13-2004.pdf