



Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

November 24, 2008

52-014
52-015

10 CFR 50

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

In the Matter of)
Tennessee Valley Authority)

BELLEVILLE NUCLEAR PLANT, UNITS 1 AND 2—REQUEST FOR ADDITIONAL
INFORMATION REGARDING ENVIRONMENTAL ASSESSMENT FOR REINSTATEMENT
OF CONSTRUCTION PERMITS

Reference: Letter from Patrick D. Milano (NRC) to Ashok S. Bhatnagar (TVA), dated
November 12, 2008

This letter provides the Tennessee Valley Authority's (TVA) response to the Nuclear Regulatory
Commission's (NRC) request for additional information (RAI) items included in the reference
letter.

A response to the NRC request in the reference letter is provided in the enclosure.

If you should have any questions, please contact Andrea Sterdis at 1101 Market Street, LP5A,
Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7119, or via email at
alsterdis@tva.gov.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 24th day of Nov, 2008.


Jack A. Bailey
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DOBS
NRC

U.S. Nuclear Regulatory Commission

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cc: w/Enclosures

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Enclosure
Letter to Nuclear Regulatory Commission
November 24, 2008

The following responds to the three Requests for Additional Information (RAIs) contained in NRC's letter of November 12, 2008.

1. With respect to your RAI responses, dated August 26, 2002, please confirm whether the responses remain full and accurate, and if not, what new or updated information regarding construction impacts pertains to your current request for reinstatement of CPPR-122 and CPPR-123. If there is new or updated information, please provide such, as appropriate. In addition, please disclose any other activities that may have occurred since the September 14, 2006, termination of CPPR-122 and CPPR-123 that may have impacts to the environment and/or natural resources.

TVA's above-referenced letter of August 26, 2002, responded to five (5) RAIs from NRC. TVA staff reviewed the pertinent areas in connection with construction-related impacts associated with Bellefonte Units 1 & 2 and provides the following responses regarding any new or updated information.

NRC Question No. 1 (August 26, 2002 Letter)

1(a) Have any additional archaeological sites in the area been identified that may be potentially impacted by the resumption of construction at Bellefonte. Have such sites been listed, or are they eligible for listing, in the National Register of Historic Places?

1(a) From the time of TVA's 2002 letter, TVA has performed additional archaeological survey work to re-evaluate those sites previously identified on the Bellefonte property as well as determine whether any additional sites may be present that would adversely affect historic properties eligible for listing in the National Register of Historic Places (NRHP) (Deter-Wolf 2006). This survey, conducted in 2006, revisited previously recorded sites 1JA111, 1JA113, 1JA300 and 1JA301 as well as additional sites on the property located in an area that would not be impacted by future construction activity. Based on the results of the 2006 survey, it was determined that sites 1JA113, 1JA300, and 1JA301 no longer retain integrity and thus do not meet the criteria of eligibility for the NRHP. One additional archaeological site consisting of a historic homestead was identified during this survey; however, this site was also determined to be ineligible for the NRHP. One site, 1JA111, continued to meet the criteria of eligibility for the NRHP. This site will be avoided, fenced off, and marked on the BLN site drawings as an area to be avoided by any future ground disturbing activities in the vicinity. The above determinations do not change the conclusion that no historic properties will be affected.

1(b) Have all excavation activities been completed near the potential archaeological sites? If not, what actions will be taken to ensure that the interests of the Alabama Historical Commission are preserved during excavation activities?

1(b) No excavation activities are known. As noted in the response to (a) above, based on the updated survey information, the one potentially eligible site (1JA111) will be avoided, fenced off, and marked on the BLN site drawings as an area to be avoided.

1(c) How did Tennessee Valley Authority (TVA) respond to the Alabama Historical Commission's recommendation regarding restoration and adaptive reuse of the 1845 Tavern and Inn? (FES, pA-39)

1(c) No change to this response.

NRC Question No 2 (August 26, 2002 Letter)

If construction of Bellefonte were to be resumed, what construction-related activities remain that might disturb previously undisturbed land or impact other natural resources? For example, are there access roads, transmission lines, buildings, facilities, etc., left to be completed, and do such activities differ from those previously evaluated in the FES?

1. TVA's plans to eventually move (reroute) the first half mile of the south entrance road are less certain at this time. The rest of the response remains unchanged.

2. No change to this response.

3. TVA has determined that no new meteorological monitoring facility need be constructed.

4. Response to this paragraph remains the same with the following clarifications. The Power Stores building has been removed and a new one may be installed. There are no plans to increase the size of the Construction and Administration Building. Also, new plant security requirements will necessitate changes to both the gatehouse and the protected area fencing. No changes in transmission lines necessary to provide electrical power to support the construction of the plant are currently contemplated.

NRC Question No. 3 (August 26, 2002 Letter)

3(a) Does the projected construction workforce of 2200 persons remain bounding should Bellefonte construction be resumed?

3(a). The currently projected peak workforce is similar to or slightly lower than the 4,600 estimated in the TVA's 2002 response. Therefore, the 2002 response remains bounding.

3(b) Since issuance of the construction permit, have there been changes to the demographics of the region that may lead to significant socioeconomic impacts different from those previously evaluated in the 1974 FES? Examples of this are demands on the local schools, hospitals, public facilities, utilities (e.g., water use), transportation infrastructure, construction worker shortages, etc.?

3(b). No known changes to the demographics of the region lead to any significant socioeconomic impacts different from those previously evaluated. The U. S. Census Bureau population estimates for 2007 show a very small decline in population in Jackson County since the 2000 Census of Population. However, data from the U. S. Bureau of Economic Analysis show a moderate increase in employment of 7.5 percent between 2001 and 2006, slightly lower than the Alabama state average of 8.3 percent but slightly higher than the national average of 6.8 percent. These patterns indicate that no changes have occurred that would alter the conclusions in the 2002 response. A discussion with the Director of Community Development for the city of Scottsboro confirms this conclusion (telephone conversation on 11/13/08 with Curtis Davis, Director of Community Development, City of Scottsboro, AL).

It is possible that a greater number of workers would temporarily relocate to Jackson County than TVA's earlier analysis indicated. TVA's earlier analysis was based on prior TVA construction-related experience at the BLN site. That analysis indicated about 1,100 workers moving into Jackson County, leading to a population increase of 3,000 persons or less at peak construction and a maximum impact on schools of less than 1,000 students. In order to bound the potential impacts, a more conservative analysis would assume that half of the workers would move into the county, approximately 2,200 to 2,300 workers. Assuming an average household size of 4, somewhat larger than the current average family size, this would result in a population increase of approximately 9,000. This would be a population increase of approximately 17 percent at peak construction. As noted in the 2002 response, impacts to public services would be significant at or near peak, but the higher levels would have a relatively short duration. Other conclusions would remain unaffected, and TVA would honor its previously-stated commitment in the original 1974 FES to monitor the situation and to work with

local and state officials to mitigate any unacceptable adverse conditions that might result.

New information regarding local minorities and poverty levels indicates that minorities constituted 9.3 percent of the total population of Jackson County in 2007, according to the latest U. S. Census Bureau estimates. This share is slightly higher than the 2000 Census of Population count of 8.8 percent. The minority population share in the county is well below both the state and national averages of 31.4 and 34.0 percent, respectively, in 2007, and 29.7 and 30.9 percent, respectively, in 2000. Census Bureau estimates of the poverty level in Jackson County in 2005 indicate that 18.8 percent of the population is below the poverty level, a larger share than the 13.7 percent reported in the 2000 Census. This county share in poverty is higher than both the state and national averages of 16.9 and 13.3 percent, respectively, in 2005, and 16.1 and 12.4 percent, respectively, in the 2000 Census.

Within the 50-mile radius of the BLN site (the BLN Region), the minority population is approximately 20 percent of the total, which is higher than in Jackson County. This is due in large part to a higher share of minority populations around Huntsville in Madison County, AL, and around Chattanooga, TN, both of which are near the outer edge of the Region. Within the 10-mile radius, there are 1,262 Census Blocks, of which 47 meet the NRC Guidance Criteria of either a minority population greater than 50 percent or a minority population percentage significantly greater (typically at least 20 percentage points) than the state average. Most of these are located to the north or northwest of the site.

Within the LPZ (2-mile radius) of BLN, there are 59 blocks, of which four contain minority populations. These four blocks have a total population of 29 persons. The minorities are largely Black in two of these blocks, a total of 17 individuals out of a total population of 21. In the other two blocks, the total population is eight, consisting of two Asian households.

Within the 50-mile region, 5.5 percent of block groups are considered low-income under NRC guidance definitions, as compared to the respective state average. Within the 10-mile radius, no block groups are considered low-income, as compared to the state average.

NRC Question No.4 (August 26, 2002 Letter)

Are there any projects or activities occurring or planned for the area that may lead to additional cumulative impacts to the surrounding population or to the natural environment?

Implementation of the Base Realignment and Closure Act includes re-alignment of Redstone Arsenal near Huntsville, a short distance east of the BLN 50-mile region. Multiple construction projects and the transfer of over 1,400 jobs are now underway. By the end of the process in 2011, more than 4,500 jobs will have been transferred to Redstone. During the construction period, now ongoing, several thousand temporary direct and indirect jobs will be created.

After construction and transfer of jobs to the Redstone Arsenal is completed, the Huntsville area will have a substantial increase in total population, along with increased pressure on roads, schools, medical care, and other infrastructures and services. (Source: Patricia C. McCarter, *Redstone projects show it's on track*, The Huntsville Times, November 13, 2008).

TVA is aware of no other new activities occurring or planned for the area that would lead to additional cumulative impacts. Population growth in the county appears to have slowed or stopped in more recent years (see response to question 3 above). However, employment in the county has increased slightly. This slowing of growth would potentially help to mitigate some of the impacts that might result from the influx of construction workers to the area.

NRC Question No. 5 (August 26, 2002 Letter)

5(a) Have any biota been added to or removed from the list of threatened or endangered species for the Bellefonte site environs (including transmission line right-of-ways) based on field studies or revisions to the threatened and endangered species list?

5(a). The following table of federally-listed species known from Jackson County, AL, was downloaded from the website of the U. S. Fish and Wildlife Service (USFWS), Daphne office on November 14, 2008.
(<http://www.fws.gov/daphne/es/specieslst.html#Jackson>).

Table 1. List of federally-listed or protected species occurring in Jackson County, Alabama.

Species	Status ¹	Addressed in 1974 FES or TVA RAI Response Letter of August 26, 2002
Gray bat <i>Myotis grisescens</i>	E	yes
Indiana bat <i>Myotis sodalis</i>	E	yes
Bald eagle <i>Haliaeetus leucocephalus</i>	BGEPA	yes, formerly federally listed, but now protected under the Bald and Golden Eagle Protection Act (BGEPA)
Palezone shiner <i>Notropis albizonatus</i>	E	yes
Anthony's riversnail <i>Athearnia anthonyi</i>	E	yes
Shiny pigtoe pearly mussel <i>Fusconaia cor (edgariana)</i>	E	yes
Pink mucket pearly mussel <i>Lampsilis abrupta</i>	E	yes
Alabama lamp pearly mussel <i>Lampsilis virescens</i>	E	yes
Pale lilliput pearly mussel <i>Toxolasma cylindrellus</i>	E	yes
Fine rayed pigtoe mussel <i>Fusconaia cuneolus</i>	E	yes
Hine's emerald dragonfly <i>Somatochlora hineana</i> (P)	E	no, see text discussion
Green pitcher plant <i>Sarracenia oreophila</i>	E	yes
Morefield's leather flower <i>Clematis morefieldii</i>	E	no, see text discussion
American hart's tongue fern <i>Phyllitis scolopendrium var. americana</i>	T	yes
Price's potato bean <i>Apios priceana</i>	T	no, see text discussion
Slabside pearly mussel <i>Lexingtonia dolabelloides</i>	C	no, see text discussion
White fringeless orchid <i>Platanthera integrilabia</i>	C	no, see text discussion

Note 1. E - Endangered; BGEPA - Bald and Golden Eagle Protection Act; T - Threatened; C - Candidate Species

There have also been recent occurrences of two federally-listed mussel species in Jackson County, i.e., the endangered orangefoot pimpleback (*Plethobasus cooperianus*) and the sheepsnose (*Plethobasus cyphus*) currently a candidate species for listing. These occurrences are reported by the State of Alabama and are not reflected in the USFWS species list for Jackson County. These mussel species were historically endemic to the Tennessee River. A recent field survey (2007) indicated that neither of these species is present in the Tennessee River adjacent to the BLN site. Neither of these mussel species would be affected by construction activities at the BLN site.

As shown on Table 1, the current list of federally-listed species for Jackson County, AL, contains several species which were not identified or discussed in the original FES for BLN nor in the two status changes. These include the addition of one dragonfly, one mussel and three plants species. The Hine's dragonfly is a historical record and is not currently reported from Alabama. The slabside pearly mussel was historically endemic to the Tennessee River. A recent field survey (2007) indicated that this species is not present in the Tennessee River adjacent to the BLN site. Field surveys for Morefield's leather flower and Price's potato bean indicate that no habitat for these species is present within construction areas on the BLN site. No habitat for the white fringeless orchid is present on the BLN site. The bald eagle has been de-listed from its former status under the Endangered Species Act, but remains protected under the Bald and Golden Eagle Protection Act.

One species discussed in TVA's 2002 letter, Harperella (*Ptilimnium nodosum*), was reported from Jackson County in 1979. However, this occurrence has never been verified, and the USFWS does not currently list the species as occurring in Jackson County.

Except for the gray bat, none of the federally-listed species of Table 1 are known to occur at or adjacent to the BLN site.

5(b) Are there any known potential adverse impact to any listed or candidate species that might result from the resumption of construction at Bellefonte?

5(b) The statements contained in TVA's August 26, 2002, letter to NRC regarding the potential for adverse impacts to any listed or candidate species remain valid. Recent fish community assessments as part of TVA's ongoing Vital Signs Monitoring Program (VSMP) and an additional mussel survey conducted in 2007 in the vicinity of BLN corroborate information regarding lack of occurrence of these aquatic species in any areas potentially affected by construction activities.

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2. With respect to your response to question 2 of the NRC staff RAI, dated June 5, 2002, regarding facilities that remain to be constructed, please confirm that any impacts to natural resources (e.g., aquatic, terrestrial, air quality, water quality, etc.) from such projected construction activities would remain within scope of the assessment conducted for the 1974 FES.

Almost all physical site disturbance and the related construction impacts associated with the completion of the BLN units have already occurred. TVA has concluded that any impacts to natural resources (e.g., aquatic, terrestrial, air quality, water quality, etc.) from any projected site construction activities would remain bounded by the original 1974 FES.

3. Please provide any changes or updates to the construction-related radiological impacts assessed in the 1974 FES.

There are no changes or updates to the construction-related radiological impacts assessed in the 1974 FES.