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RS-14-028

10 CFR 50.75(f)(1)  
10 CFR 50.82(a)(8)

January 28, 2014

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-001

Dresden Nuclear Power Station, Unit 1  
Facility Operating License No. DPR-2  
NRC Docket No. 50-010

Peach Bottom Atomic Power Station, Unit 1  
Facility Operating License No. DPR-12  
NRC Docket No. 50-171

**Subject:** Response to Request for Additional Information Related to 2013 Report on Status of Decommissioning Funding for Reactors

- References:**
- 1) Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "2013 Report on Status of Decommissioning Funding for Reactors," dated April 1, 2013
  - 2) Letter from John B. Hickman (U. S. NRC) to Michael J. Pacilio, (Exelon Generation Company, LLC), "Dresden Nuclear Power Station Unit 1 and Peach Bottom Atomic Power Station Unit 1 – 2013 Decommissioning Funding Status Report - Request for Additional Information," dated December 16, 2013

In Reference 1, Exelon Generation Company, LLC, (EGC) submitted a report on the status of decommissioning funding for the reactors owned by EGC in accordance with 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," paragraph (f)(1). In Reference 2, the U. S. Nuclear Regulatory Commission (NRC) requested additional information to complete its review of the EGC decommissioning funding status report for Dresden Nuclear Power Station, Unit 1 and Peach Bottom Atomic Power Station, Unit 1. The Attachment to this letter provides the requested information. Reference 2 requested that the response be submitted to the NRC within 30 days of the date of the letter. However, in a discussion between Mr. Patrick Simpson of EGC and Mr. John Hickman of the NRC on January 6, 2014, it was agreed that EGC would provide the response by January 28, 2014.

There are no new regulatory commitments made in this letter. If you have any questions about this letter, please contact Mr. Timothy A Byam at (630) 657-2818.

Respectfully,

A handwritten signature in black ink, appearing to read "Patrick R. Simpson", with a long horizontal flourish extending to the right.

Patrick R. Simpson  
Manager - Licensing  
Exelon Generation Company, LLC

cc: Regional Administrator - NRC Region I  
Regional Administrator - NRC Region III  
NRC Senior Resident Inspector - Dresden Nuclear Power Station  
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station

Attachment: Response to NRC Request for Additional Information

## ATTACHMENT

### RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION

*The requests for additional information (RAIs) are in response to the 2013 Decommissioning Funding Status (DFS) Report for Dresden Nuclear Power Station, Unit 1 and Peach Bottom Atomic Power Station, Unit 1. On April 1, 2013, Exelon Generation Company, LLC (EGC) submitted to the U.S. Nuclear Regulatory Commission (NRC) the 2013 Decommissioning Funding Status (DFS) report for Dresden Nuclear Power Station, Unit 1 (Dresden 1), and Peach Bottom Atomic Power Station, Unit 1 (Peach Bottom) as required under Title 10 of the Code of Federal Regulations (10 CFR) Section 50.75(f)(1) and 10 CFR 50.82 (a)(8)(v)-(vii).*

#### **Question #1: Minimum Formula Amount**

*On April 1, 2013, EGC provided radiological decommissioning costs associated with license termination for Dresden 1 and Peach Bottom. EGC did not provide the required minimum funding assurance amount, based on the formula from 10 CFR 50.75(c).*

*Per 10 CFR 50.75(f)(1), "...the information in this report must include, at a minimum the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c)."*

*For both Dresden 1 and Peach Bottom provide the amount of decommissioning funds estimated to be required based on the formula from 10 CFR Sections 50.75(b) and (c).*

#### **Response to Question #1**

In Reference 1, EGC reported the "formula cost amount per 10 CFR 50.75(c)" as "N/A" for Dresden Nuclear Power Station (Dresden), Unit 1 (Reference 1, Attachment 7, line item number 1) and Peach Bottom Atomic Power Station (Peach Bottom), Unit 1 (Reference 1, Attachment 15, line item number 1).<sup>1</sup> EGC reported the "site-specific cost amount per 10 CFR 50.75(b)(4) and 50.75(f)(2)" as \$389,840 (thousands of dollars) for Dresden Unit 1 (Reference 1, Attachment 7, line item number 2) and \$200,545 (thousands of dollars) for Peach Bottom Unit 1 (Reference 1, Attachment 15, line item number 2) and also provided an explanation for the various assumptions reflected in the site-specific cost estimates. EGC responded in this manner, and did not include a formula cost amount using the formula in 10 CFR 50.75(c), because Dresden Unit 1 and Peach Bottom Unit 1 have been shutdown since October 31, 1978 and October 31, 1974, respectively, and some decommissioning activities have already occurred at both units. In accordance with the regulatory requirements (i.e., 10 CFR 50.82(a)(4)(i) and 50.82(a)(8)(v)(B)), EGC previously submitted site-specific decommissioning cost estimates for both Dresden Unit 1 and Peach Bottom Unit 1 and submits, on an annual basis, a financial assurance status report that reflects the estimated costs (based on the site-specific decommissioning cost estimates) to complete decommissioning. The NRC formula cost amount determined by 10 CFR 50.75(c) is not directly applicable and instead, the funding

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<sup>1</sup> Questions #1, 2, and 3 refer to "Peach Bottom" generally. To the extent EGC provided "formula cost amount per 10 CFR 50.75(c)" cost estimates for Peach Bottom Units 2 and 3 (Attachments 16 and 17, respectively, to Reference 1), EGC assumes Questions #1, 2, and 3 are directed at Peach Bottom Unit 1.

assurance amount is based on a site-specific cost estimate for decommissioning the facility in accordance with 10 CFR 50.75(b)(4) and 50.82(a)(8)(v)(B).

In addition, the formulas in 10 CFR 50.75(c) are modeled on different reactor types that do not apply to Peach Bottom Unit 1 and do not translate to Dresden Unit 1 given the vintage reactor designs and much smaller operating capacity of both reactor units. 10 CFR 50.75(c) lists two formulas based on reactor type, one for Boiling Water Reactors (BWRs) and one for Pressurized Water Reactors (PWRs). Peach Bottom Unit 1 was a High Temperature Gas Cooled Reactor (HTGR), which does not translate to a BWR or PWR as specified in the formula for calculating the formula cost amount, and hence a formula cost amount per 10 CFR 50.75(c) cannot be calculated for Peach Bottom Unit 1.

Dresden Unit 1 was a BWR reactor that operated at a maximum power level of 700 MWt (< 1200 MWt as specified in 10 CFR 50.75(c)). The estimated amount to decommission Dresden Unit 1, calculated pursuant to 10 CFR 50.75(c), would be \$577.9 million (as of December 31, 2012). This amount assumes Dresden Unit 1 was a BWR reactor type rated at a power capacity of 1200 MWt as required by the formula in 10 CFR 50.75(c). The calculation of this value assumes the labor, energy, and burial factors described in Attachment 1 of Reference 1.

### **Question #2: Decommissioning Costs**

*On April 1, 2013, EGC did not provide the estimated total cost of decommissioning activities as stated in the most recent Site Specific Cost Estimate (SSCE) update. EGC did provide the estimated cost of remaining decommissioning activities.*

*Per 10 CFR 50.82(a)(8)(v)(A) and (B), "...the report must include the following information, current through the end of the previous calendar year: the amount spent on decommissioning, both cumulative and over the previous calendar year, the remaining balance of any decommissioning funds, and the amount provided by other financial assurance methods being relied upon; an estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based."*

*For both Dresden 1 and Peach Bottom provide the estimated total cost of decommissioning activities as stated in the most recent SSCE update.*

### **Response to Question #2**

The most recent SSCE updates for Dresden Unit 1 and Peach Bottom Unit 1 do not reflect the estimated total cost of decommissioning during the entire period from shutdown through completion of decommissioning. Decommissioning expenditures prior to the year the SSCE updates were prepared (historical expenditures) are not included in the estimated total cost of decommissioning in the final SSCE reports. Rather, the SSCE cost estimates, for shutdown units, evaluate the total costs starting from the calendar year in which the cost estimate is prepared.

The most recent SSCE for Dresden Unit 1 was performed in August 2012. The 2012 SSCE for Dresden Unit 1 reflects a total estimated cost of radiological decommissioning activities (as of calendar year 2012) of \$392,767 (thousands of dollars), escalated to end of year 2012 dollars.

The value provided in Reference 1, Attachment 7, line item number 2 was \$389,840 (thousands of dollars), escalated to end of year 2012 dollars. The difference of \$2,927 (thousands of dollars) is due to the fact that the Reference 1, Attachment 7, cash flow calculations do not include the SSCE estimate for the 2012 annual radiological cost (\$2,928 (thousands of dollars))<sup>2</sup> because EGC considered the SSCE estimated cost for 2012 decommissioning activities to be an historical expenditure at the time the decommissioning funding assurance report was generated.

For Peach Bottom Unit 1, the SSCE was most recently performed in June 2010. The total estimated cost of radiological decommissioning activities from calendar year 2010 forward in the SSCE for Peach Bottom Unit 1 was \$200,545 (thousands of dollars), escalated to end of year 2012 dollars. The value provided in Reference 1, Attachment 15, line item number 2 was \$200,545 (thousands of dollars), escalated to end of year 2012 dollars. There is no difference in the two values because the Peach Bottom Unit 1 SSCE estimated the annual radiological costs for years 2010 through 2012 to be \$0.

### **Question #3: Decommissioning Costs**

*On April 1, 2013, EGC did not provide the difference between actual and estimated costs for decommissioning work performed during the previous year.*

*Per 10 CFR 50.82(a)(8)(v),*

*"The report must include the following information, current through the end of the previous calendar year: an estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based."*

*For both Dresden 1 and Peach Bottom provide the difference between actual and estimated costs for decommissioning work performed during the previous year.*

### **Response to Question #3**

For Dresden Unit 1, the actual 2012 cost for decommissioning work is provided in Reference 1, Attachment 7, line item number 9 and was reported as \$2,840 (thousands of dollars). The most recent Dresden Unit 1 SSCE estimated the 2012 cost (radiological decommissioning costs only) to be \$2,928 (thousands of dollars), for a difference of -\$88 (thousands of dollars) (actual costs were \$88 (thousands of dollars) less than estimated costs). Reference 1, Attachment 7 note (d) stated that the actual cost was "consistent with the projected 2012 expense total from the site specific cost estimate."

For Peach Bottom Unit 1, the actual 2012 cost for decommissioning work is provided in Reference 1, Attachment 15, line item number 9 and was reported as \$276 (thousands of dollars). The most recent Peach Bottom Unit 1 SSCE estimated the 2012 cost (radiological decommissioning costs only) to be \$0, for a difference of \$276 (thousands of dollars) (actual costs were \$276 (thousands of dollars) more than estimated costs). Since the actual costs were

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<sup>2</sup> The values for the difference (\$2,927 (thousands of dollars)) and the estimated cost (\$2,928 (thousands of dollars)) are off by \$1 (thousands of dollars) due to rounding.

considered immaterial to the overall funding assurance analysis, no comparison was made in Reference 1, Attachment 15.

**Reference:**

1. Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "2013 Report on Status of Decommissioning Funding for Reactors," dated April 1, 2013