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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 27, 2004

Ms. Leah R. Morrell  
Licensing Officer  
BWX Technologies, Inc.  
Nuclear Products Division  
P.O. Box 785  
Lynchburg, Virginia 24505-0785

SUBJECT: BWX TECHNOLOGIES, INC. - REQUEST FOR ADDITIONAL INFORMATION  
ON YOUR ENVIRONMENTAL REPORT FOR THE LICENSE RENEWAL  
APPLICATION (TAC L31836)

Dear Ms. Morrell:

This letter is to inform you that the Nuclear Regulatory Commission (NRC) staff has completed its initial review of the Environmental Report (dated March 10, 2004) that is part of your license renewal request for SNM-42. The staff has concluded that additional information is required to complete the review. The NRC requests that you respond to the enclosed Request for Additional Information, by letter, no later than January 28, 2005.

If you have any questions regarding this matter, contact me at (301) 415-5848 or via e-mail to [bcg@nrc.gov](mailto:bcg@nrc.gov).

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Exemption number _____	
Nuclear Regulatory Commission review required before public release.	
Gary S. Janosko, NMSS/FCSS	
Name and organization of person making determination _____	
Date of Determination	12-27-04

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L. Morrell

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Sincerely,



William Gleaves, Project Manager  
Fuel Manufacturing Section  
Fuel Cycle Licensing Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 70-27  
License No.: SNM-42

Enclosure: Request for Additional Information

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### Request for Additional Information

License Renewal Request  
BWX Technologies, Inc.  
Docket No. 70-27  
License Number SNM-42

This request for additional information is needed to evaluate compliance with Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), as amended; U.S. Nuclear Regulatory Commission (NRC) NEPA-implementing regulations (10 CFR Part 51); NRC Environmental Review Guidance for Licensing Actions Associated with the NMSS Programs (NUREG-1748, NRC, 2003); and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508). The information must be of sufficient detail to support staff independent environmental impact analysis of the proposed project and alternatives. Please provide the following information concerning your Integrated Safety Analysis (ISA) Summary submittal:

**1. Clarify Existence, Management, and Impacts of High-Level Radioactive Solid Waste**

With regard to high-level radioactive waste, clarify: 1) whether BWX Technologies, Inc. (BWXT) produces high-level radioactive waste; 2) how BWXT would manage such waste, and 3) what impacts would be associated with such waste. Table 3-13 of the March 10, 2004, Environmental Report for Renewal of License SNM-42, (ref. 1) indicates that the Lynchburg Technology Center has generated radioactive high-level waste. No mention of this high-level waste was found in the environmental report text. BWXT should: 1) confirm the existence of this high-level waste; 2) describe any impacts and the waste management system (collection, storage, and disposal) for the waste; or 3) provide justification for the lack of such impacts and system.

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Name and organization of person making determination
Date of Determination <u>12-27-04</u>

Enclosure

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## 2. Confirm Site Size

Clarify the size of the BWXT facility site. Section 2.2.1 of the environmental report (ref. 1) states that the site size is 193 ha [476 acres]. In Section 3.1 of the supplemental environmental assessment for renewal of the license (ref. 4), the BWXT facility is stated to be located on 212.5 ha [525 acres]. BWXT should confirm the size of the site.

## 3. Update Population Distribution Data around BWXT Site

Clarify the current population distribution in the vicinity of the BWXT facility. Since the last license renewal in 1995, population and income data from the 2000 Census (U.S. Census Bureau, 2004) have become available. The total population for Lynchburg and a three-county region of influence has been included in the March 10, 2004, environmental report (ref. 1). The population distribution, however, was not updated to reflect the new information. BWXT should provide updated population distribution data similar to the 1995 supplemental environmental assessment (ref. 4), Table 3.4 and Figure 3.1 or a rationale for why such an update is not necessary to assess the socioeconomic and public health impacts from the proposed action.

## 4. Provide Regional Air Quality Information

Provide information about the BWXT air quality region. The description of air quality in Sections 3.6 and 4.6 of the environmental report (ref. 1) does not identify the air quality region in which the BWXT site is located or indicate whether this region is designated as a nonattainment or maintenance area for any of the six National Ambient Air Quality Standards criteria pollutants (40 CFR 81.343). The region attainment status can affect the permitted emission levels for the BWXT facility and is required to support the description of air quality.

## 5. Expand Description of Regional Historic and Cultural Resources

Describe the regional historic and cultural resources. The description of these resources presented in Sections 3.8 and 4.8 of the environmental report (ref. 1) is limited to sites identified in the National Register of Historic Places. To enable NRC to assess compliance with requirements in Section 106 of the National Historic Preservation Act and 36 CFR Part 800, BWXT should provide the following:

- A brief history of the area including Native American settlement, European settlement, and agricultural and industrial development,
- Information from past consultations with the State Historical Preservation Officer and Tribal Historical Preservation Officer,
- A discussion on whether any Native American Tribes are affected or impacted by the BWXT site,
- Information from past cultural resource evaluations and archeological surveys conducted at the BWXT site or in surrounding areas,
- Identification of management guidelines, operating procedures, or memorandums of understanding with the State Historical Preservation Officer concerning protection or mitigation procedures in the event of archeological discoveries at the site, and
- An indication if BWXT facility buildings have been surveyed and evaluated for significant historic or cultural resources because of their age.

**6. Clarify Existence, Management, and Impacts of Waste Disposed Onsite**

Clarify whether BWXT currently disposes of any waste onsite. Section 2.4 of the 1995 environmental assessment (ref. 4) indicates that some solid wastes are disposed onsite. BWXT should: 1) identify wastes disposed of onsite; 2) provide relevant information such as disposal location, generation rates, and volumes; and 3) identify any impacts.

**7. Update Mixed Waste Management**

Provide information describing whether BWXT ships mixed waste offsite for disposal. Section 2.4.2 of the environmental assessment (ref. 4) indicates that the sludge bottom mixed waste is stored onsite since no licensed commercial disposal facilities were available that could accept this waste. An update on mixed waste disposal is required. If the mixed waste is not shipped offsite, BWXT should provide information comparing the waste generation rates with the remaining storage capacity and identify any impacts.

**8. Explain BWXT Incident Rates**

Describe the BWXT Occupational Safety and Health Administration (OSHA) incident rate in detail. Section 3.11.2 of the environmental report (ref. 1) states that the average OSHA incident rate from 2000 to 2003 was 1.8. BWXT should provide units for this value and compare this incident rate to industry standards.

**9. Provide Nonradiological Exposure Protection Plans**

Provide information about nonradiological exposures. The public and occupational health information presented in Section 4.12 of the environmental report (ref. 1) is limited to radiological matters. BWXT should describe the policies or programs that protect workers from industrial hazards and nonradiological chemical exposures.

**10. Provide Radiological Occupational Dose Data**

Provide occupational radiological exposure data. Section 3.11.2 of the environmental report (ref. 1) states that occupational exposures are well below the limits specified in 10 CFR Part 20 and that the average exposure for occupationally exposed personnel is less than 1 mSv [100 mrem] per year (total effective dose equivalent). However, no supporting exposure data are presented. BWXT should provide data to support the calculated occupational exposures.

**11. Identify Any New Operations**

Identify whether any new operations are associated with the BWXT license renewal request. The environmental report (ref. 1) did not address whether new operations were planned. The evaluation of environmental impacts for continued operation of the site is based on review of the impacts from past and current operations. Any planned changes from past or current operations need to be accounted for to evaluate their impacts. BWXT should clarify if plans for new operations exist and if so, identify the associated anticipated environmental impacts, such as changes in the type or quantity of effluents.

**12. Identify Impacts from Removed License Conditions**

Provide information concerning impacts from removed license conditions. In the letter requesting the license renewal (ref. 4), BWXT requested that several license conditions be deleted from SNM-42. BWXT should evaluate whether there would be any impacts if these license conditions were removed from the license.

**13. Identify Types and Levels of Nonradiological Air Emissions and Compare Values to Regulatory Limits**

Provide information on all regulated pollutants from the nonradiological air emission data. Information in Section 4.6 of the environmental report (ref. 1) for onsite nonradiological air emissions is limited to nitrogen oxides and hydrofluoric acid. Section 5.1.2 of the 1995 environmental assessment (ref. 4) indicates that sampling for nitrogen oxides and hydrofluoric acid occurs intermittently. The offsite or environmental air monitoring described in Section 4.6 of the environmental report (ref. 1) was limited to radiological sampling. BWXT should provide sampling frequency and emission levels for both onsite and offsite (environmental) monitoring for all National Ambient Air Quality Standards pollutants and all relevant National Emissions Standards for Hazardous Air Pollutants and compare these levels to regulatory limits or provide the justification for why nonradiological monitoring is limited to nitrogen oxides and hydrofluoric acid on an intermittent basis.

**14. Identify Sources and Levels of Liquid Effluents for All Outfalls and Compare Values to Regulatory Limits**

Identify the sources, discharge levels, and regulatory limits for all outfalls. Section 3.4.1 of the environmental report (ref. 1) is not clear on how many outfalls are permitted (i.e., 3 or 6) under Virginia Pollutant Discharge Elimination System Permit No. 00367. Also, effluent limitations presented in Table 3-2 of the environmental report (ref. 1) are for Outfall 001 only. Section 2.2.1 of the environmental report (ref. 1) identifies the source for Outfall 001 as effluent from the Waste Treatment Facility but does not indicate the source for any other outfall. BWXT should provide information indicating the source for each outfall, the nonradiological discharge levels from each outfall, and a comparison of these discharge levels to the appropriate regulatory limit for that outfall.

**15. Compare Radiological Air Emissions Levels to Regulatory Limits**

Compare radiological air emission data to regulatory limits. Radiological air emissions data for the stacks are provided in Table 4-5 and for the boundary sites in Table 4-6 of the environmental report (ref. 1). BWXT should compare these emission levels to the regulatory limits.

**16. Provide Storm Water Management Program Information**

Describe the BWXT storm water management program. The environmental report (ref. 1) does not contain any information about such a program. BWXT should provide a brief description of any storm water management program conducted onsite, including outfalls and associated regulatory limits.

**17. Provide Information on Current Status of Water-Supply Wells.**

Indicate the current status of any on-site wells as well as future plans for those wells. Section 4.4 of the environmental report (ref. 1) indicates that there is no longer any impact from water withdrawals. Beginning in 2003, BWXT began using water supplied by the Campbell County Utilities and Service Authority public water supply. This eliminated the need to withdraw water from the James River or on-site wells.

**18. Clarify Status of All License Conditions**

Clarify whether BWXT intends to include or remove Safety Conditions S-1, S-2, and S-17 from the renewed license. In the letter requesting the license renewal (ref. 2), BWXT identifies which conditions are to be brought forward and which ones are to be deleted. Conditions S-1, S-2, and S-17 do not appear in either list. BWXT should clarify whether they want these conditions included or removed from the license.

**REFERENCES FOR RAI**

1. BWXT, "Environmental Report for Renewal of License SNM-42," March 10, 2004.
2. BWXT, "Request to Renew License SNM-42," Letter to Director, Office of Nuclear Material Safety and Safeguards, June 30, 2004. <[www.nrc.gov/reading-rm/adams.html](http://www.nrc.gov/reading-rm/adams.html)>
3. NRC, NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs—Final Report." Washington, DC, August 2003.
4. NRC, "Supplemental Environmental Assessment for Renewal of Special Nuclear Materials License SNM-42." Docket 70-27. Washington, DC: 1995.
5. U.S. Census Bureau, "United States Census 2000 Gateway," October 26, 2004. <<http://www.census.gov/main/www/cen2000.html>>