May 29, 2008

Mr. David A. Christian President and Chief Nuclear Officer Virginia Electric and Power Company Innsbrook Technical Center 5000 Dominion Boulevard Glen Allen, VA 23060-6711

# SUBJECT: MILLSTONE POWER STATION, UNIT 3 – DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR PROPOSED STRETCH POWER UPRATE (TAC NO. MD6070)

Dear Mr. Christian:

Enclosed is a copy of the Draft Environmental Assessment and Finding of No Significant Impact related to your application for the proposed stretch power uprate amendment dated July 13, 2007,<sup>1</sup> and as supplemented by additional letters.<sup>2</sup>

The proposed license amendment would allow an increase in the maximum authorized power level from 3,411 megawatts thermal (MWt) to 3,650 MWt, and make changes to the facility operating license and technical specifications, as necessary, to support operation at the stretch power level.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/**ra**/

John G. Lamb, Senior Project Manager Plant Licensing Branch I-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-423 Enclosure: Draft Environmental Assessment cc w/encls: See next page

 <sup>&</sup>lt;sup>1</sup> DNC Letter (07-450) to the NRC, "Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 3 License Amendment Request, Stretch Power Uprate," dated July 13, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072000386).
<sup>2</sup> Supplemental Letters dated: July 13, 2007 (ML072000281); September 12, 2007 (ML072570061); November 19, 2007

<sup>&</sup>lt;sup>2</sup> Supplemental Letters dated: July 13, 2007 (ML072000281); September 12, 2007 (ML072570061); November 19, 2007 (ML073230976); December 13, 2007 (ML073480240); December 17, 2007 (ML073520051); January 10, 2008 (ML080100600, ML080100604, ML080100606, ML080100611); January 11, 2008 (ML080110695, ML080140077, ML080170495, ML080580476); January 14, 2008 (ML080140570); January 18, 2008 (ML080220506, ML080220527, ML080220530, ML080220541, ML080280375); January 31, 2008 (ML080320308); February 25, 2008 (ML080560392, ML080560615); March 5, 2008 (ML080660108); March 10, 2008 (ML080710377, ML080710391); March 25, 2008 (ML080580894); March 27, 2008 (ML080880268); April 4, 2008 (ML081430014); April 24, 2008 (ML081150679); April 29, 2008 (ML081200643); May 15, 2008 (ML081360625); and May 20, 2008 (ML081420443).

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Millstone Power Station, Unit No. 3

CC:

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# UNITED STATES NUCLEAR REGULATORY COMMISSION DOMINION NUCLEAR CONNECTICUT, INC. DOCKET NO. 50-423 MILLSTONE POWER STATION, UNIT 3 DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE PROPOSED LICENSE AMENDMENT TO INCREASE THE MAXIMUM REACTOR POWER LEVEL

AGENCY: U.S. Nuclear Regulatory Commission (NRC).

SUMMARY: The NRC has prepared a draft Environmental Assessment (EA) as its evaluation of a request by the Dominion Nuclear Connecticut, Inc., (DNC or the licensee), for a license amendment to increase the maximum thermal power at the Millstone Power Station, Unit 3 (Millstone 3), from 3,411 megawatts thermal (MWt) to 3,650 MWt. The NRC staff did not identify any significant impact from the information provided in the licensee's stretch power uprate (SPU) application for Millstone 3 or from the NRC staff's independent review; therefore, the NRC staff is documenting its environmental review in a draft EA. The draft EA and Finding of No Significant Impact are being published in the *Federal Register* with a 30-day public comment period.

## ENVIRONMENTAL ASSESSMENT

The NRC is considering issuance of an amendment to Renewed Facility Operating License No. NPF-49, issued to DNC for operation of Millstone 3, located in New London County, Connecticut. Therefore, as required by Title 10 of the *Code of Federal* Regulations (10 CFR) Section 51.21, the NRC is issuing this draft environmental assessment and finding of no significant impact.

### Plant Site and Environs:

Millstone 3 is located in the Town of Waterford, Connecticut, about 40 miles east of New Haven and 40 miles southeast of Hartford, Connecticut. Millstone 3 is located on Millstone Point between the Niantic and Thames Rivers. The site sits on the edge of the Long Island Sound and Niantic Bay and is approximately 20 miles west of Rhode Island.

The site is approximately 525 acres including the developed portion of the site, which is approximately 220 acres in size. In addition to Millstone 3, the site includes the shutdown Millstone Power Station, Unit 1 reactor and the operating Millstone Power Station, Unit 2 reactor.

The site includes approximately 50 acres of natural area and approximately 30 acres of recreational playing fields licensed to the Town of Waterford. Approximately 300 acres of the site are outside the land developed for the power station. The transmission lines that connect the Millstone Power Station to the New England grid along with the switchyard equipment are owned and maintained by the Connecticut Light and Power Company.

The exclusion area coincides with the site property boundary. The nearest residences are approximately 2400 feet from the reactors. The region, within 6 miles of the site, includes parts of the towns of Waterford, New London, Groton, East Lyme, and Old Lyme.

## Identification of the Proposed Action:

The proposed action would revise the Millstone 3 renewed facility operating license and technical specifications to increase the licensed rated power by approximately 7 percent from 3,411 MWt to 3,650 MWt. The proposed action is in accordance with the licensee's application dated July 13, 2007. If approved, the SPU would be implemented during the scheduled fall 2008 refueling outage.

#### The Need for the Proposed Action:

The proposed action permits an increase in the licensed core thermal power from

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3,411 MWt to 3,650 MWt for Millstone 3, providing the flexibility to obtain a higher electrical output from the Millstone Power Station. The proposed action is intended to provide an additional supply of electric generation in the State of Connecticut without the need to site and construct new facilities or to impose new sources of air or water discharges to the environment. The proposed action is intended to supply approximately 85 megawatts of additional electric capacity in a region of the New England Independent System Operator (ISO-NE) system where peak loads generally exceed local generation capacity.

## Environmental Impacts of the Proposed Action:

The licensee has submitted an environmental evaluation supporting the proposed SPU and provided a summary of its conclusions concerning the radiological and non-radiological environmental impacts of the proposed action.

## Non-radiological Impacts

## Land Use Impacts

The proposed SPU would not affect land use at the site. No new construction is planned outside of the existing facilities, and no expansion of buildings, roads, parking lots, equipment storage areas, or transmission facilities would be required to support the proposed SPU. The proposed SPU would not require the storage of additional industrial chemicals or storage tanks on the site.

#### Transmission Facilities

The proposed SPU would not require any new transmission lines, transmission line conductor modifications, or new equipment to support SPU operation and would not require changes in the maintenance and operation of existing transmission lines, switchyards, or substations.

The licensee did not provide an estimate of the increase in the operating voltage due to the proposed SPU. Based on experience from SPUs at other plants, the NRC staff concludes that the increase in the operating voltage would be negligible. Because the voltage would not change significantly, there would be no significant change in the potential for electric shock.

The proposed SPU would increase the current. The National Electric Safety Code (NESC) provides design criteria that limit hazards from steady-state currents. The NESC limits the short-circuit current to the ground to less than 5 milliamperes. The transmission lines meet the applicable shock prevention provision of the NESC. Therefore, even with the slight increase in current attributable to the SPU, adequate protection is provided against hazards from electrical shock.

There would be an increase in current passing through the transmission lines associated with the increased power level of the proposed SPU. The increased electrical current passing through the transmission lines would cause an increase in electromagnetic field (EMF) strength. However, there is no scientific consensus regarding the health effects of EMFs produced by operating transmission lines. Therefore, the licensee did not quantify the chronic effects of EMF on human and biota. The potential for chronic effects for these fields continues to be studied and is not known at this time. The National Institute of Environmental Health Sciences (NIEHS) directs related research through the U.S Department of Energy. A 2003 NIEHS study published in *Environmental Health Perspectives*, Volume 111, Number 3, dated March 2003, titled "Power-Line Frequency Electromagnetic Fields Do Not Induce Changes in Phosphorylation, Localization, or Expression of the 27-Kilodalton Heat Shock Protein in Human Keratinocytes," by Biao Shi, Behnom Farboud, Richard Nuccitelli, and R. Rivkah Isseroff of the University of California, contains the following conclusion:

"The linkage of the exposure to the power-line frequency (50–60 Hz) electromagnetic fields (EMF) with human cancers remains controversial after more than 10 years of study. The *in vitro* studies on the adverse effects of EMF on human cells have not yielded a clear conclusion. In this study, we investigated whether power-line frequency EMF could act as an environmental insult to invoke stress responses in human keratinocytes using the 27-kDa heat shock protein (HSP27) as a stress marker. After exposure to 1 gauss (100  $\mu$ T)

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EMF from 20 min to 24 hr, the isoform pattern of HSP27 in keratinocytes remained unchanged, suggesting that EMF did not induce the phosphorylation of this stress protein. EMF exposure also failed to induce the translocation of HSP27 from the cytoplasm to the nucleus. Moreover, EMF exposure did not increase the abundance of HSP27 in keratinocytes. In addition, we found no evidence that EMF exposure enhanced the level of the 70-kDa heat shock protein (HSP70) in breast or leukemia cells as reported previously. Therefore, in this study we did not detect any of a number of stress responses in human keratinocytes exposed to power-line frequency EMF."

To date, there is not sufficient data to cause the NRC staff to change its position with respect to the chronic effects of EMFs. If, in the future, the NRC staff finds that, contrary to current indications, a consensus has been reached by appropriate Federal health agencies that there are adverse health effects from electromagnetic fields, the NRC staff will recommend the Commission change its current position regard EMF.

# Water Use Impacts

The proposed SPU would increase the temperature of water discharged from Millstone 3. Temperatures at the discharge point would range from 50.5 °F in January through February to 90.6 °F in August through September. The maximum expected discharge temperature at 100 percent power under SPU conditions is 94.5 °F. Under all SPU conditions, Millstone Power Station will continue to operate in conformance with the existing National Pollution Discharge Elimination System (NPDES) permit conditions. The site NPDES permit limits the maximum temperature of the circulating water discharge to the quarry to 98 °F, the maximum change in temperature from Niantic Bay to the quarry to 24 °F, and the maximum temperature of water entering Long Island Sound at the quarry cut is 105 °F. The discharge is not allowed to increase the temperature of Long Island Sound beyond the plant's 8,000-ft radius mixing zone by more than an average of 4 °F and not to exceed a maximum of 83 °F. The maximum temperature rise across the condenser under SPU conditions is 19.5 °F, which remains below the NPDES permit limit of 24 °F. With the ocean temperature at its design maximum temperature of 75 °F, the circulating water discharge temperature at its design maximum 94.5 °F during normal 100-percent power operation, which remains below the NPDES discharge limit of 98 °F. Because the increase under SPU conditions remains well below the facility's NPDES permit limits, the NRC staff determined that this increase is not significant and is bounded by previous NRC analysis of thermal discharge as documented in the "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants: Regarding Millstone Power Station, Units 2 and 3," dated July 2005. No effects on the aquatic or terrestrial habitat in the vicinity of the plant, or to endangered or threatened species, or to the habitats of endangered or threatened species are expected as a result of the increase in thermal discharge. No measurable changes in the character, source, or intensity of noise generated at Millstone Station are expected as a result of the SPU, either inside or outside the plant.

## Socioeconomic Impacts

The socioeconomic impacts associated with implementing the proposed SPU at Millstone 3 include a minor positive contribution in relation to the contribution of the overall outage scope to local and regional economies. The proposed SPU has a small positive impact on the continuation of employment of the local population with the associated expenditures for goods and services. The amount of future property tax payments are dependent on the future market value of the units, future valuations of other properties in these jurisdictions, and other factors according to the licensee's proposed SPU amendment, dated July 13, 2007.

## Historic and Archaeological Resources at and near Millstone Power Station

There are 181 properties in New London County listed in the National Register of Historic Places, with 62 falling within a radius of 6 miles of the Millstone Power Station site, according to the licensee's proposed SPU application, dated July 13, 2007. The licensee also performed an archaeological records search for the Millstone Power Station site according to the licensee's proposed SPU application, dated July 13, 2007. The proposed SPU is not expected to impact historic or archaeological resources.

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## Summary

The proposed SPU would not result in a significant change in non-radiological impacts in the areas of land use, transmission facility operation, water use, socioeconomic factors, or historical or archaeological resources.

#### Radiological Impacts

## Liquid Radioactive Waste and Offsite Doses

The licensee evaluated the impacts of the proposed SPU on radioactive liquid waste production, processing, discharge into the environment, resultant dose to members of the public, and impact to the quarry and Long Island Sound into which water is discharged. There will be a small increase (approximately 9.1 percent for long-lived activity) in the equilibrium radioactivity in the reactor coolant, which in turn will result in a maximum increase of 9.1 percent in the radioactivity content of the liquid releases, since input activities are based on long-term reactor coolant activity. Tritium levels are also expected to increase by 9.1 percent in the discharged liquid. This will result in increased aqueous tritium concentrations in the quarry. The releases, excluding tritium, would remain bounded by Table D-4a of the "Final Environmental Statement [FES] related to the operation of Millstone Nuclear Power Station, Unit 3," dated December 1984, which estimates liquid effluent releases, excluding tritium, of about 0.56 curies per year. The licensee's evaluation estimates the annual average release of tritium to be 1,100 curies based on values from 2001 through 2005, which is below the value reported in the "Generic Environmental Impact Statement [GEIS] for License Renewal of Nuclear Plants" (1996). The GEIS estimates an annual average of 1,330 curies of tritium liquid effluent releases.

The evaluation shows that even with the small increase in the radioactivity being discharged into the environment, the projected dose to the maximally exposed member of the public, while slightly increased, (2.61E-03 millirem (mrem) for the Whole Body and 1.26E-02 mrem for the Critical Organ) will remain well below the "as low as is reasonably achievable"

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(ALARA) criteria in Appendix I to 10 CFR Part 50 (3 mrem to the total body and 10 mrem to any organ).

## Gaseous Radioactive Wastes and Offsite Doses

The licensee evaluated the impacts of the proposed SPU on gaseous radioactive wastes. Gaseous radioactive wastes are activation gases and fission product radioactive noble gases which come from radioactive system leakage, continuous degasification, volume control tank (VCT) venting, gases used for tank cover gas, and gases generated in the radiochemistry laboratory. The evaluation shows that the proposed SPU would not significantly increase the inventory of gases normally processed in the gaseous waste management system. This is based on no change to the plant system functions and no change to the gas volume inputs occurring under SPU conditions.

The activity of radioactive gaseous nuclides present in the waste gas system will increase as a result of the SPU. This is due to the increased levels of gases in the reactor coolant system and the actions performed in the VCT. However, the operation of the waste gas system will not change and will continue to allow for decay of the short-lived radionuclides. Tritium will remain the largest component of the gaseous effluents, the largest contributor being from evaporation from the spent fuel pools. The proposed SPU will result in a small increase (approximately 9.5 percent for noble gases and 9.1 percent for particulates, iodine, and tritium) in the equilibrium radioactivity in the reactor coolant, which in turn increases the activity in the gaseous waste disposal systems and the activity released to the atmosphere.

The evaluation shows that even with the small increase in the gaseous radioactivity being discharged into the environment, the projected dose to the maximally exposed member of the public, while slightly increased (2.03E-02 mrem to the total body or 2.11E-02 mrem to the skin), will remain well below the ALARA criteria in Appendix I to 10 CFR Part 50 (5 mrem to the total body or 15 mrem to the skin).

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#### Solid Radioactive Waste and Offsite Doses

Solid radioactive waste (radwaste) includes solids used in the reactor coolant system operation, solids recovered from the reactor coolant systems, and solids in contact with the reactor process system liquids or gases. While the SPU will slightly increase the activity level of radioactive isotopes in the reactor coolant system and the volume of radioactive liquid generated from leakage and planned drainage, there will only be a minimal effect on the generation of radioactively contaminated sludge and resin solids processed as radwaste. The currently installed radwaste system and its total volume capacity for handling solid radwaste will not be affected. The activity of radwaste would increase proportionately to the increase in long half-life coolant activity, which would be bounded by a 9.1 percent increase under SPU conditions. This increase remains well below the activity level of 9,100 curies identified in Table 5-21 of the FES for Millstone 3. The increase in volume generated is expected to be minor under SPU conditions.

For the long-term operation of the plant under SPU conditions, the dose to an offsite member of the public from the onsite storage of solid radwaste is estimated to increase by approximately 10.22 percent. This is based on several assumptions, which are: (1) the current waste decays and its contribution decreases; (2) stored radwaste is routinely moved offsite for disposal; (3) waste generated post-SPU enters into storage; and (4) the plant capacity factor approaches the target of 1.0. The radiation dose from direct shine is cumulative based on the waste generated and stored onsite from all units over the plant's lifetime. The Millstone Station Offsite Dose Calculation Manual contains the requirements to ensure compliance with the radiation dose limits of 10 CFR Part 20 (100 mrem to the whole body in a year). Therefore, while a small increase in offsite radiation dose is expected (0.17 mrem to the whole body in a year; the pre-SPU whole body in a year was approximately 0.12 mrem), it will remain within regulatory limits of 10 CFR Part 20.

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#### **Occupational Radiation Doses**

The radiation exposure to plant workers from the SPU is expected to be kept to a minimum based on the design features at the Millstone site and the Radiation Protection Program. The design features include: (1) shielding, which is provided to reduce levels of radiation; (2) ventilation, which is arranged to control the flow of potentially contaminated air; (3) an installed radiation monitoring system, which is used to measure levels of radiation in potentially occupied areas and measure airborne radioactivity throughout the plant; and (4) respiratory protective equipment, which is used as prescribed by the Radiation Protection Program. The Radiation Protection Program contains procedures for all radiological work performed at the Millstone Power Station to ensure doses are maintained ALARA and in compliance with regulatory limits in 10 CFR Part 20.

## Fuel Cycle and Transportation Impacts

The environmental impacts of the fuel cycle and transportation of fuel and waste are described in 10 CFR 51.51, Table S-3 and 10 CFR 51.52, Table S-4, respectively. An NRC generic EA (53 FR 6040, dated February 29, 1988) evaluated the applicability of Tables S-3 and S-4 to a higher burn-up fuel cycle and concluded that there would be no significant change in environmental impact from the parameters evaluated in Tables S-3 and S-4 for fuel cycles with uranium enrichments up to 5 weight percent uranium-235 and burn-ups less than 60,000 MW days per metric ton of uranium-235 (MWd/MTU).

The proposed SPU would increase the power level to 3,650 MWt, which is below the reference power level of 3,800 MWt for Table S-4. The fuel enrichment and burn-up after the SPU will continue to be no greater than 5 weight percent uranium-235, and the fuel burn-up will be maintained less than 60,000 MWd/MTU. The NRC staff concludes that the Millstone 3 SPU is bounded by the analysis of the environmental effects of the transportation of fuel and waste

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as described in the "Extended Burnup Fuel Use in Commercial [Light Water Reactors] LWRs; Environmental Assessment and Finding of No Significant Impact," dated February 29, 1988 (53 FR 6040).

#### Summary

Based on the NRC staff review of licensee's submission, it is concluded that the proposed SPU would not significantly increase the consequences of accidents, would not result in a significant increase in occupational or public radiation exposure, and would not result in significant additional fuel cycle environmental impacts. Accordingly, the Commission concludes that there would be no significant radiological environmental impacts associated with the proposed action.

## Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the NRC staff considered denial of the proposed SPU (i.e., the "no-action" alternative). Denial of the application would result in no change in the current environmental impacts. However, if the proposed SPU were not approved, other agencies and electric power organizations may be required to pursue alternative means of providing electric generation capacity to offset the increased power demand forecasted for the ISO-NE regional transmission territory.

A reasonable alternative to the proposed SPU would be to purchase power from other generators in the ISO-NE network. In 2008, generating capacity in ISO-NE consisted primarily of combined-cycle generators: combined-cycle generated 37.8 percent of ISO-NE capacity; fossil - 29.9 percent; nuclear - 13.6 percent; hydroelectric - 10.4 percent; combustion turbine - 7.4 percent; diesel - 0.7 percent; and miscellaneous - 0.2 percent. This indicates that the majority of purchased power in the ISO-NE territory would likely be generated by a combined-cycle facility. Construction (if new generation is needed) and operation of a combined-cycle plant would create impacts in air quality, land use, and waste management significantly greater

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than those identified for the proposed SPU at Millstone 3. Millstone 3 does not emit sulfur dioxide, nitrogen oxides, carbon dioxide, or other atmospheric pollutants that are commonly associated with combined-cycle plants. Conservation programs such as demand-side management could feasibly replace the proposed SPU's additional power output. However, forecasted future energy demand in the ISO-NE territory may exceed conservation savings and still require additional generating capacity. Furthermore, the proposed SPU does not involve environmental impacts that are significantly different from those originally identified in the 1984 Millstone FES for operation.

#### Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the "Final Environmental Statement related to the Operation of Millstone Nuclear Power Station, Unit 3," dated December 1984, or the "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants: Regarding Millstone Power Station, Units 2 and 3," dated July 2005.

## Agencies and Persons Consulted:

In accordance with its stated policy, on March 28, 2008, via electronic mail, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080930624), the NRC staff consulted with the Connecticut State Official, Mr. Denny Galloway of the Department of Environmental Protection, regarding the environmental impact of the proposed action. The state official submitted the following comments via electronic mail, dated March 31, 2008 (ADAMS Accession No. ML080930624):

- 1. Does the SPU change fuel heat-up estimates under accident conditions? If so, by how much and is there still an adequate margin of safety to ensure safe shutdown of the reactor?
- 2. Are there any changes to possible off-site consequences from design basis accidents with the SPU that change current estimates on early or delayed health effects?

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- 3. Does the SPU negatively impact critical safety functions for the safe shutdown of the reactor?
- 4. Is there sufficient safety injection with a margin of safety for the additional 239.0 MWt?

## STATE OF CONNECTICUT COMMENT 1

Does the SPU change fuel heat-up estimates under accident conditions? If so, by how much and is there still an adequate margin of safety to ensure safe shutdown of the reactor?

# NRC RESPONSE TO COMMENT 1

This comment will be addressed in the NRC staff safety evaluation for the proposed power uprate.

The proposed power uprate will result in operation of a higher energy core. The reactor fuel, however, will not change significantly. The changes to the fuel to implement the uprate include a slightly higher steady-state heat generation rate and a minor increase in stored energy in the fuel. Under accident conditions, the increase in stored energy will have an impact on predicted fuel centerline and cladding temperatures, but the NRC staff is reviewing these increases to ensure there will be sufficient margin to the applicable acceptance criteria, and an acceptable margin of safety.

In the limiting accident scenario regarding peak fuel cladding temperature for the proposed power uprate, the large-break, loss-of-coolant accident, the NRC staff is reviewing the analysis for the predicted peak cladding temperature to ensure it meets the acceptance criteria of 2,200 °F.

A postulated ejection of a rod cluster control assembly (control rod) is the limiting accident with respect to peak fuel temperature. The NRC staff is reviewing the analyses for the proposed power uprate to ensure the acceptance criterion for acceptable fuel temperatures is met for the specific Millstone Power Station, Unit 3 fuel design. Regarding the safe shutdown of the reactor, the NRC staff evaluates the shutdown of the reactor, and the shutdown capability for a reactor based on the functional capability of the control rods to insert into the core and shutdown the nuclear reactor. In the sense of this comment, however, we construe your question to be directed to the state of the reactor after a postulated accident. In this sense, the NRC staff is reviewing the licensee's analyses for the proposed power uprate amendment to ensure the acceptance criteria are met and that the core will remain in a coolable geometry following a postulated accident.

## STATE OF CONNECTICUT COMMENT 2

Are there any changes to possible off-site consequences from design basis accidents with the SPU that change current estimates on early or delayed health effects?

## NRC RESPONSE TO COMMENT 2

See the *Radiological Impacts* section above.

## STATE OF CONNECTICUT COMMENT 3

Does the SPU negatively impact critical safety functions for the safe shutdown of the reactor?

# NRC RESPONSE TO COMMENT 3

This comment will be addressed in the NRC staff safety evaluation for the proposed power uprate.

The NRC staff is reviewing the functional design of the control rod drive system to ensure that the control rods will remain capable of inserting into the core and safely shutdown the reactor. The NRC staff is also reviewing the effects of a postulated accident that results from a failure of the control rod drive system to affect a safe shutdown. The NRC staff is reviewing the proposed power uprate amendment to ensure compliance with the requirements of 10 CFR 50.62, "Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants."

#### STATE OF CONNECTICUT COMMENT 4

Is there sufficient safety injection with a margin of safety for the additional 239.0 MWt? NRC RESPONSE TO COMMENT 4

This comment will be addressed in the NRC staff safety evaluation for the proposed power uprate.

The NRC staff is reviewing the licensee's loss-of-coolant accident analyses, which model the capabilities of the safety injection systems at the proposed uprated power level. FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated July 13, 2007, as supplemented on July 13, 2007, September 12, 2007, November 19, 2007, December 13, 2007, December 17, 2007, January 10, 2008 (4 letters), January 11, 2008 (4 letters), January 14, 2008, January 18, 2008 (5 letters), January 31, 2008, February 25, 2008 (2 letters) March 5, 2008, March 10, 2008 (2 letters), March 25, 2008, March 27, 2008, April 4, 2008, April 24, 2008, April 29, 2008, May 15, 2008, and May 20, 2008. Publicly available records are accessible electronically via the Agencywide Document Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov. Additionally, documents may be examined and/or copied for a fee, at

the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

DATES: The comment period expires **[30 days after publication]**. Comments received after this date will be considered if it is practical to do so, but the Commission is only able to assure consideration of comments received on or before **[30 days after publication]**.

ADDRESSES: Submit written comments to Chief, Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission, Mail Stop T-6D59, Washington, DC 20555-0001. Written comments may also be delivered to 11545 Rockville Pike, Room T-6D59, Rockville, Maryland 20852 from 7:30 a.m. to 4:15 p.m. on Federal workdays. Copies of written comments received will be electronically available at the NRC's Public Electronic Reading Room link, <u>http://www.nrc.gov/reading-rm/adams.html</u>, on the NRC Web site or at the NRC's PDR located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to <u>pdr@nrc.gov</u>.

SUPPLEMENTARY INFORMATION: The NRC is considering issuance of an amendment to Renewed Facility Operating License No. NPF-49 issued to DNC for the operation of Millstone Power Station, Unit 3, located in New London County, Connecticut. FOR FURTHER INFORMATION CONTACT: John G. Lamb, Office of Nuclear

Reactor Regulation, Mail Stop O-8B1A, U.S. Nuclear Regulatory Commission, Washington,

DC 20555-0001, by telephone at (301) 415-3100, or by email at <u>JGL1@nrc.gov</u>.

Dated at Rockville, Maryland this 29th day of May, 2008.

# FOR THE NUCLEAR REGULATORY COMMISSION

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John G. Lamb, Senior Project Manager Plant Licensing Branch I-2 Division of Operating Reactors Office of Nuclear Reactor Regulation