(T–5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, by telephone at 301–415–6445, or by e-mail to *INFOCOLLECTS.Resource@NRC.GOV*.

Dated at Rockville, Maryland, this 24th day of April 2009.

For the Nuclear Regulatory Commission.

Tremaine Donnell,

Acting NRC Clearance Officer, Office of Information Services.

[FR Doc. E9–9941 Filed 4–29–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 50–455; NRC–2009–0182]

Exelon Generation Company, LLC, Byron Station, Unit No. 2; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Section 50.46, ''Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors,'' paragraph (a)(1)(i) for Facility Operating License No. NPF–66, issued to Exelon Generation Company, LLC (Exelon, the licensee), for operation of the Byron Station, Unit No. 2 (Byron 2), located in Ogle County, Illinois. Therefore, as specified in 10 CFR 51.21, the NRC staff has performed an environmental assessment as described in this notice and has made a finding of no significant impact.

Environmental Assessment

Identification of the Proposed Action:

The proposed action would grant an exemption from the requirement of 10 CFR 46(a)(1)(i) related to fuel cladding material. The proposed action would allow a third cycle of irradiation (i.e., burnup) for up to 16 twice-burned fuel rods in Westinghouse AXIOM™ cladding in a lead test assembly (LTA), with the remaining fuel rods in the LTA being fresh fuel rods in AXIOM™ cladding. This third cycle of irradiation is expected to begin in the Cycle 16 core for Byron 2 in the spring of 2010. Previously, by letter dated June 30, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061380518), the NRC staff approved the irradiation of four LTAs containing AXIOM™ clad fuel rods in the Byron Station, Unit No. 1 (Byron 1) Cycle 15 core. In the same letter, the NRC staff also approved the re-insertion of two of the four LTAs into the Byron 1 Cycle 16 core and the other two LTAs into the Byron 2 Cycle 15 core. Byron 1 is currently operating in Cycle 16; Byron 2 is currently operating in Cycle 15. Prior to re-insertion of the LTAs into the Cycle 16 and Cycle 15 cores, respectively, for the second cycle of irradiation, the licensee performed post-irradiation examination (PIE) for the LTAs. During the spring 2010, Byron 2 refueling outage, the licensee plans to perform PIE for the two LTAs, then re-insert one LTA into the Byron 2 Cycle 16 core to gain high burnup data. The LTA will consist of fresh fuel rods in AXIOM™ cladding along with up to 16 twice-burned fuel rods in AXIOM™ cladding selected from the irradiated LTAs. The licensee estimated that, at the beginning of this third cycle, the twice-burned fuel rods will have a burnup of approximately 50,000 megawatt days per metric ton uranium (MWD/MTU) and, at the end of this third cycle, the fresh fuel rods would reach an average burnup of approximately 27,500 MWD/MTU and the twice-burned fuel rods could reach a peak rod average burnup of 75,000 MWD/MTU.

The proposed action is in response to the licensee's exemption request dated March 24, 2008 (ADAMS Accession No. ML080850235). Also, information in the licensee's letter dated September 23, 2005 (ADAMS Accession No. ML060930560), that supported the exemption previously issued on June 30, 2006, has been considered in this action.

The Need for the Proposed Action:

Pursuant to 10 CFR 50.12, ''Specific exemptions,'' the licensee, in its letter dated March 24, 2008, requested an exemption from the requirements of 10 CFR 50.46 and 10 CFR Part 50, Appendix K for one LTA using AXIOM™ cladding.

As the licensee stated in its letter dated March 24, 2008, ''The purpose of irradiating the twice-burned AXIOM™ clad fuel rods in a fresh LTA is to: (1) Evaluate the AXIOM™ clad fuel rod performance at projected rod burnups between 72,000 to 75,000 MWD/MTU, (2) collect fuel clad profilometry data after one cycle for the fresh rods and after three cycles for the high burnup rods, and (3) evaluate AXIOM™ clad integral fuel burnable absorber fuel rod performance.''

The regulation at 10 CFR 50.46(a)(1)(i) requires that ''[e]ach boiling or pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy or ZIRLO cladding must be provided with an emergency core cooling system (ECCS) that must be designed so that its calculated cooling performance following postulated loss-of-coolant accidents conforms to the criteria set forth in paragraph (b) of this section.'' The regulation at 10 CFR 50.46(a)(1)(ii) requires that, ''[a]lternatively, an ECCS evaluation model may be developed in conformance with the required and acceptable features of appendix K ECCS Evaluation Models.'' Appendix K of 10 CFR Part 50 requires, in paragraph I.A.5, that ''[t]he rate of energy release, hydrogen generation, and cladding oxidation from the metal/water reaction shall be calculated using the Baker-Just equation (Baker, L., Just, L.C., ''Studies of Metal Water Reactions at High Temperatures, III. Experimental and Theoretical Studies of the Zirconium-Water Reaction,'' ANL–6548, page 7, May 1962).'' The regulations make no provisions for use of fuel rods clad in a material other than zircaloy or ZIRLO™. As noted previously, the licensee plans to irradiate one LTA using fuel rods clad with AXIOM™ alloy in Byron 2. Because the material specification of the AXIOM™ alloy differs from the specification for zircaloy and ZIRLO™, the licensee requested a plant-specific exemption from the requirements of 10 CFR 50.46 and 10 CFR Part 50, Appendix K, to support the use of the LTA for Byron 2.

As a result of the NRC staff's safety evaluation, the details of which will be provided as part of the letter to the licensee approving the exemption from 10 CFR 50.46(a)(1)(i), the NRC staff determined that an exemption from 10 CFR Part 50, Appendix K, is not necessary in this circumstance and, therefore, is not issuing an exemption from 10 CFR Part 50, Appendix K.

Environmental Impacts of the Proposed Action:

The proposed action would grant an exemption from a regulation for the acceptance and analytical criteria for emergency core cooling systems; the exemption is not an exemption from regulations directly governing offsite dose/exposure, occupational exposure, or the environment.

The NRC staff has completed its evaluation of the proposed action and concludes that there are no significant environmental impacts associated with the use of one LTA using AXIOM™ cladding for a third cycle of irradiation up to a burnup of 75,000 MWD/MTU. The following is a summary of the NRC staff's evaluation:

In this environmental assessment, the NRC staff is relying, in addition to information submitted by the licensee, on the results of a study conducted for it by the Pacific Northwest National Laboratory (PNNL) entitled,

''Environmental Effects of Extending Fuel Burnup Above 60 GWD/MTU [gigawatt days per metric ton uranium],'' NUREG/CR–6703, PNNL–13257, January 2001. Although the study evaluated the environmental impacts of high burnup fuel up to 75,000 MWD/MTU, certain aspects of the review were limited to evaluating the impacts of extended burnup up to 62,000 MWD/MTU because of the need for additional data about the effect of extended burn-up on gap-release fractions. During the study, all aspects of the fuel-cycle were considered, from mining, milling, conversion, enrichment and fabrication through normal reactor operation, transportation, waste management, and storage of spent fuel.

The NRC staff has concluded that such changes would not adversely affect plant safety, and would have no adverse effect on the probability of any accident. For accidents that involve damage or melting of the fuel in the reactor core, fuel rod integrity has been shown to be unaffected by the extended burnup under consideration; therefore, the probability of an accident will not be affected. For accidents in which the core remains intact, the increased burnup may slightly change the mix of fission products that could be released in the event of a serious accident; however, the NRC staff concludes that the limited number of high burnup fuel rods in one LTA will not result in a significant change during core-wide events.

Accidents that involve the damage or melting of the fuel in the reactor core and spent fuel handling accidents were also evaluated in NUREG/CR–6703. The accidents considered were a loss-of-coolant accident (LOCA), a steam generator tube rupture, and a fuel-handling accident (FHA).

For LOCAs, the amount of radionuclides that would be released from the core (1) is proportional to the amount of radionuclides in the core and (2) is not significantly affected by the gap-release fraction. The gap-release fraction is a small contributor to the amount of radionuclides available for release when the fuel is severely damaged. Any increase in the amount of some longer-lived radionuclides available for release from the single LTA (1) will be small and (2) will not result in a significant increase in the overall core inventory of radionuclides. Therefore, there would be no significant increase in the previously calculated dose from a LOCA and the dose would remain below regulatory limits.

The pressurized-water reactor steam generator tube rupture accident involves direct release of radioactive material from contaminated reactor coolant to the environment. No change is being requested by the licensee to the Byron Station technical specifications (TSs) pertaining to allowed cooling-water activity concentrations. The maximum coolant activity is regulated through TSs that are independent of fuel burnup. Therefore, the gap-release fraction does not significantly affect the amount of radionuclides available for release during a steam generator tube rupture. Therefore, there would be no significant increase in the previously-calculated dose from a steam generator tube rupture and the calculated dose would remain below regulatory limits.

The scenario postulated to evaluate potential FHAs involves a direct release of gap activity to the environment. The assumptions regarding gap activity are based on guidance in Regulatory Guide 1.183, ''Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors,'' July 2000, and in NUREG/CR–5009, ''Assessment of the Use of Extended Burnup Fuel in Light Water Power Reactors,'' February 1988. The gap activity consists primarily of noble gases and iodine. The isotopes that contribute significant fractions of the whole body and thyroid doses are ^{87}Kr and ^{131}I, respectively. The inventory of iodine and the primary dose contributor, decreases with increasing burnup. In addition, the single LTA will only contribute a small variation in the isotopic population of the entire Byron 2 core (193 fuel assemblies). In its letter dated March 24, 2008, the licensee discussed the conservatisms associated with the Byron FHA dose calculation, specifically: Use of the alternative source term methodology, the relative power for this particular LTA in Cycle 16, offloading time, containment isolation, and mechanical fuel damage due to impact. Based on the considerations discussed above, the NRC staff concludes (1) that the increase in the previously calculated dose resulting from a FHA involving the one LTA would not be significant, and (2) that the dose would remain below regulatory limits.

Regulatory limits on radiological effluent releases are independent of burnup. The requirements of 10 CFR 50.36a, ''Technical specifications on effluents from nuclear power reactors,'' and 10 CFR Part 50, Appendix I, ''Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents,'' ensure that any release of gaseous, liquid, or solid radiological effluents to unrestricted areas are kept ''as low as reasonably achievable.'' Therefore, the NRC staff concludes that during routine operations, there will be no significant increase in the amount of gaseous radiological effluents released into the environment as a result of the proposed action, nor will there be a significant increase in the amount of liquid radiological effluents or solid radiological effluents released into the environment.

No significant increase in the allowable individual or cumulative occupational radiation exposure will occur. The impacts to workers is expected to be reduced with higher irradiation due to the need for less frequent outages for fuel changes and less frequent fuel shipments to and from reactor sites.

The use of extended irradiation will not change the potential environmental impacts of incident-free transportation of spent nuclear fuel or the accident risks associated with spent fuel transportation if the fuel is cooled for 5 years after discharge from the reactor. NUREG/CR–6703 concluded that doses associated with incident-free transportation of spent fuel with burnup to 75 GWD/MTU are bounded by the doses given in 10 CFR 51.52, ''Environmental effects of transportation of fuel and waste—Table S–4,'' for all regions of the country if dose rates from the shipping casks are maintained within regulatory limits. Increased fuel burnup will decrease the annual discharge of fuel to the spent fuel pool, which will postpone the need to remove spent fuel from the pool.

With regard to potential non-radiological environmental impacts of reactor operation with extended irradiation, the proposed changes involve systems located within the restricted area as defined in 10 CFR part 20, ''Standards For Protection Against Radiation.''

Therefore, the proposed action does not result in any significant changes to land use or water use, or result in any significant changes to the quality or quantity of effluents. The proposed action does not affect nonradiological plant effluents, and no changes to the National Pollution Discharge Elimination System permit are needed. 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. The proposed action does not have a potential to affect any historical or archaeological sites.

The proposed action will not change the method of generating electricity or the method of handling any influents

from the environment or non-radiological effluents to the environment. Therefore, no changes or different types of non-radiological environmental impacts are expected as a result of the exemption.

Accordingly, the NRC staff concludes that there are no significant environmental impacts associated with the proposed action.

For more detailed information regarding the environmental impacts of extended fuel burnup, please refer to NUREG/CR–6703.

The details of the NRC staff's safety evaluation will be provided in the exemption that will be issued as part of the letter to the licensee approving the exemption to the regulation.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the NRC staff considered denial of the proposed action (*i.e.,* the ''no-action'' alternative). Denial of the exemption request would result in no change in current environmental impacts. The environmental impacts of the proposed exemption and this alternative are similar.

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 Byron Station, Units 1 and 2,'' NUREG–0848, dated April 1982.

Agencies and Persons Consulted:

In accordance with its stated policy, on February 27, 2009, the NRC staff consulted with the Illinois State official, Mr. Frank Niziolek of the Illinois Emergency Management Agency, regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the NRC staff concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC staff 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 March 24, 2008 (ADAMS Accession No. ML080850235). Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 1555 Rockville Pike, Rockville, Maryland 20852. Publicly available records will be accessible electronically from the ADAMS Public Electronic Reading Room on the Internet at the NRC Web site: *http://www.nrc.gov/reading-rm/adams.html.* 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 send an e-mail to *pdr@nrc.gov.*

Dated at Rockville, Maryland, this 23rd day of April 2009.

For The Nuclear Regulatory Commission

Christopher Gratton,

Senior Project Manager, Plant Licensing Branch III–2, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

[FR Doc. E9–9950 Filed 4–29–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 030–32694; NRC–2009–0183]

Notice of Availability of Environmental Assessment and Finding of No Significant Impact for Amendment of Byproduct Materials License No. 24–00513–38, for Unrestricted Release of Facilities at University of Missouri in St. Louis, MO

AGENCY: Nuclear Regulatory Commission.

ACTION: Issuance of environmental assessment and finding of no significant impact for license amendment.

FOR FURTHER INFORMATION CONTACT: Peter J. Lee, PhD, CHP, Health Physicist, Materials Control, ISFSI, and Decommissioning Branch, Division of Nuclear Materials Safety, Region III, U.S. Nuclear Regulatory Commission, 2443 Warrenville Road, Lisle, Illinois 60532; telephone: (630) 829–9870; fax number: (630) 515–1259; or by e-mail at *Peter.Lee@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend Byproduct Materials License No. 24–00513–38. This license is held by the Curators of the University of Missouri (the Licensee) for its facilities located at 8001 Natural Bridge Road, St. Louis, Missouri. Issuance of the amendment would authorize release of certain laboratories, designated by the licensee as R–109, R–201, R–411, R–412, R–417, R–433, R–435, R–439, and S–466 (collectively, the ''Facility''), for unrestricted use. The Facility is located at the above address. The Licensee requested this action in letter dated February 10, 2009 (ADAMS Accession No. ML090480210). The NRC has prepared an Environmental Assessment (EA) in support of this proposed action in accordance with the requirements of Title 10, Code of Federal Regulations (CFR), Part 51 (10 CFR part 51). Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate with respect to the proposed action. The amendment will be issued to the Licensee following the publication of this FONSI and EA in the **Federal Register**.

II. Environmental Assessment

Identification of Proposed Action

The proposed action would approve the Licensee's February 10, 2009, license amendment request, resulting in the release of the Facility for unrestricted use (the criteria for unrestricted use is set forth in 10 CFR 20.1402). The applicable NRC decommissioning regulation, under which this proposed action would be carried out, is 10 CFR 30.36. License No. 24–00513–38 was issued on August 21, 1992, pursuant to 10 CFR part 30, and has been amended periodically since that time. The license authorizes the use of by-product materials for laboratory research and development, including metabolic labeling and in-vitro experiments. The licensee ceased using licensed materials in the Facility in 2008. The Licensee has conducted radiological surveys of the Facility (the licensee conducted surveys for laboratories R–109 and R–201 in 2007, and conducted surveys for the remainder of the laboratories in 2008). The results of these surveys were provided to the NRC to demonstrate that the criteria in 10 FR 20.1402 for unrestricted release have been met.

Need for the Proposed Action

The Licensee has ceased conducting licensed activities at the Facility and seeks the unrestricted use of its Facility.

Environmental Impacts of the Proposed Action

The historical review of licensed activities conducted at the Facility shows that such activities involved use of hydrogen-3, carbon-14, phosphorus-32, phosphorus-33, sulfur-35, molybdenum-99, iodine-125, and cesium-137. Prior to performing the radiological surveys, the Licensee conducted decontamination activities, as necessary, in the areas of the Facility affected by these radionuclides.

Three radiological survey reports, together covering all areas of the facility, were attached to the licensee's amendment request dated February 10,