

A CMS Energy Company

Big Rock Point Restoration Project
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U.S Nuclear Regulatory Commission
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10 CFR 50.12
10 CFR 50.54(w)
10 CFR 140.8
10 CFR 140.11

**DOCKETS 50-155 AND 72-043 – LICENSE DPR-6 – BIG ROCK POINT PLANT –
REQUEST FOR EXEMPTION FROM THE INSURANCE COVERAGE AND THE
FINANCIAL REQUIREMENT LIMITS OF 10 CFR 50.54(w) AND 10 CFR 140.11**

**Reference: Letter from Consumers Energy, Big Rock Point Plant to the U.S. Nuclear
Regulatory Commission, *Certification of Permanent Fuel Removal*,
September 23, 1997**

Request

Pursuant to 10 CFR 50.12 "Specific Exemptions" and 10 CFR 140.8 "Specific Exemptions," Consumers Energy Company (Consumers) is requesting Nuclear Regulatory Commission (NRC) approval of exemption from the insurance coverage and financial protection requirement limits of 10 CFR 50.54(w) and 10 CFR 140.11 for Big Rock Point. Specifically Consumers requests that the commercial insurance limits required to be maintained be reduced to \$25 million under 10 CFR 50.54(w) for stabilization and decontamination insurance and \$25 million under 10 CFR 140.11 for financial protection. Consumers understands, but desires NRC's confirmation, that the \$500 million NRC indemnity will remain in place for costs above the \$25 million.

Current Situation

Consumers has previously been granted an exemption under 10 CFR 50.54(w) and is currently maintaining \$500 million of stabilization and decontamination insurance. Consumers also maintains \$44,400,000 of financial protection in the form of commercial nuclear liability insurance from American Nuclear Insurers in accordance with 10 CFR 140.11. An indemnity agreement with the NRC provides \$500 million of financial protection once costs from a nuclear accident exceed \$44,400,000.

Supporting Information

In August of 1997, the only reactor at the Big Rock Point site was permanently shutdown and subsequently defueled. During 2002 the spent fuel pool was cleared of all shippable radioactive material, leaving only the fuel and miscellaneous Greater Than Class C (GTCC) material for dry storage. The fuel and GTCC material were transferred to dry storage and moved to the Independent

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Spent Fuel Storage Installation (ISFSI) during 2003. A small Plutonium-Beryllium neutron source was also transferred to the ISFSI at that time. The reactor vessel was then removed, packaged, and shipped, and buried, as was the steam drum. Following the reactor vessel and steam drum shipments, the spent fuel pool was drained, cleaned, and the liner was removed. The liquid radwaste system and all contaminated radioactive systems have been dismantled. Some processing of small volumes of slightly contaminated water continues, which involves evaporating the water and disposing of the remaining sludge as radwaste. With the exception of activated concrete removal (currently in progress) all of the highly radioactive material has been removed from the former operating areas.

Consumers is currently in the process of clearing the site buildings and foundations and performing actions as discussed in the License Termination Plan that will enable the non-ISFSI portions of the site to be released. Water processing has been reduced to collecting ground water from the site and rainwater collected during building excavations. The water collected is monitored prior to discharge. A water retention basin of approximately 300,000 gallons is being installed for ground water and rainwater control during building excavation. The collected water will be monitored prior to discharge.

Accidents involving the non-ISFSI source material (activated concrete) remaining in the former plant operating area are the most limiting. The resultant radiation levels possible from any accident are extremely low. Little or no on-site particulate, gaseous or liquid releases are possible.

The health and safety of the public relative to the ISFSI are further protected due to the robustness of the fuel storage system design since there are no credible accidents that affect the integrity of the canister; therefore, the possibility of a release is negligible.

The fuel is stored in seven stainless steel canisters each stored within a concrete over-pack. The Safety Analysis Reports (SARs): WSNF-220 for the storage system and WSNF-223 for the canister, contain the accident and natural phenomena conditions the cask and canister were designed to withstand. As part of the condition for use of the generic storage system Big Rock Point generated a 10 CFR 72.212 report demonstrating that the site-specific requirements have been satisfied for the generic design.

Accident conditions evaluated in the SARs include: storage cask vent blockage, transfer cask loss of neutron shield, cask drop, storage cask tip over while on the J-skid, fire, fuel rod rupture, internal pressure, leakage of the confinement boundary, explosive overpressure and misalignment during horizontal transfer. Natural phenomena include: flooding, tornado, earthquake, wind, lightning, snow and ice loads, and burial under debris. The FuelSolutions™ Storage System was generally designed to a more severe condition of seismic, tornado and environmental loads than the conditions used in the original plant design, with the exception of certain tornado missiles and snow loadings.

FuelSolutions™ provided an evaluation of the BRP specific tornado missiles and their impact on the casks showing that the integrity of the casks will be maintained and they will be able to perform

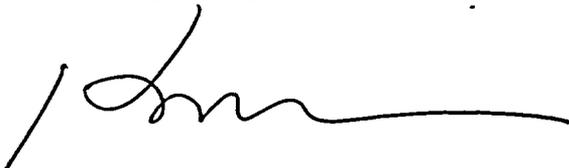
their important-to-safety function. The BRP site-specific extreme snow load was also evaluated by FuelSolutions™ and found to be acceptable.

The generic cask design criteria requires confinement safety during unlikely but credible design basis accidents and protection of the fuel clad. No credible dynamic event can impart significant amounts of energy to a storage cask placed on the ISFSI and there is no dispersal mechanism for the spread of radioactivity. In addition, since the plant shutdown in August 1997, all the fuel has been cooling for a minimum of six years, with the oldest fuel being discharged in June of 1974 (nearly 30 years of cooling). Thus the source term reduction due to fuel decay also factors into the protection of the public health and safety.

In a proposed rule (62 FR 58690) issued October 30, 1997, and never enacted, the NRC proposed a graded reduction of stabilization and decontamination insurance and financial protection based on a site's status of decommissioning. The site's status takes into consideration: if there are other operating reactors onsite, if fuel remains in the reactor, the spent fuel cladding temperature, if spent fuel remains in the fuel pool and the amount of radioactive liquid remaining on-site. Configuration 4 is defined as: the reactor is defueled, there are no operating reactors on-site, there is no fuel in the spent fuel pool and there is less than 1,000 gallons of radioactive liquid onsite. Big Rock Point has achieved Configuration 4 status. For a reactor in Configuration 4, the proposed rule provided that the stabilization and decontamination insurance [per 10 CFR 50.54(w)] and the financial protection (per 10 CFR 140.11) could be reduced to \$25 million, each.

Based upon remaining low level of risk and information contained in the proposed NRC rule-making Consumers Energy Company is requesting a reduction in the stabilization and decontamination insurance to \$25 million and a reduction in the financial protection in the form of commercial nuclear liability insurance to \$25 million. This reduction in insurance coverage is equivalent with the rates proposed by the NRC for a reactor in Configuration 4 (i.e. the reactor is defueled, there is no operating reactor on-site, there is no fuel in the spent fuel pool and there is less than 1,000 gallons of radioactive liquid onsite).

If you have any questions, please contact Mr. Gregory C. Withrow, Engineering, Operations, and Licensing Manager at 231-547-8176.



Kurt M. Haas
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cc: Administrator, Region III, USNRC
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NRC NMSS Project Manager