

**NUCLEAR REGULATORY COMMISSION**

[Docket No. 50-155]

**Environmental Assessment and Finding of No Significant Impact  
for Consumers Energy's Request to Modify Existing §20.2002 Authorization,  
for Big Rock Point, License DPR-006, Charlevoix County, Michigan**

**AGENCY:** Nuclear Regulatory Commission

**ACTION:** Environmental Assessment and Finding of No Significant Impact

**FOR FURTHER INFORMATION CONTACT:** James Shepherd, Division of Waste Management and Environmental Protection, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Mail Stop T7E18, Washington, DC 20555-00001. Telephone: (301) 415-6712; email [jcs2@nrc.gov](mailto:jcs2@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The U.S. Nuclear Regulatory Commission (NRC) is considering approval of a request to dispose of demolition debris contaminated with polychlorobiphenyl (PCB) in accordance with Title 10 of the Code of Federal Regulations (10 CFR) Section 20.2002 for Facility Operating License No. DPR-6, issued to Consumers Energy Company, ((CE) or the licensee), for the possession of the Big Rock Point (BRP) Plant, located in Charlevoix County, Michigan. This authorization will revise CE's existing authority to dispose of low-contamination material in a State of Michigan Type II landfill in accordance with 10 CFR 20.2002 by authorizing CE to dispose of such waste that also has PCB at a landfill licensed to accept PCBs. This proposed action would also exempt the low-contaminated material authorized for disposal from further Atomic Energy Act (AEA) and NRC licensing requirements. The NRC has prepared an

Environmental Assessment (EA) in support of this proposed action in accordance with the requirements of 10 CFR Part 51. Based upon the EA, the NRC has determined that a Finding of No Significant Impact (FONSI) is appropriate.

## **II. Environmental Assessment**

### Background:

On March 14, 2001, in accordance with 10 CFR 20.2002, the licensee submitted a request to dispose of low-activity demolition debris from the Big Rock Point (BRP) Restoration Site in a Type II sanitary landfill approximately 100 km (60 mi) from the site, licensed by the State of Michigan, in accordance with 10 CFR 20.2002. The licensee later revised the request on May 18, 2001 and June 20, 2001. NRC approved the request in May, 2002, and BRP began shipping material to the landfill.

Subsequently, debris coated with polychlorobiphenyl (PCB)-contaminated paint, mainly structural steel, was identified during demolition. The State of Michigan Type II landfill that is currently accepting the debris contaminated with residual radioactivity does not accept PCB bulk product waste. Therefore, on September 15, 2004, the licensee submitted a revised request to dispose of about 1.4 million kilograms (three million pounds) of low-activity PCB bulk product waste in an alternate landfill, approximately 445 km (275 mi) from the site, licensed by the State of Michigan and the U.S. Environmental Protection Agency (EPA) to accept PCBs.

The licensee will continue to ship low-activity demolition debris that is not contaminated with PCB to the original Type II landfill.

A comparison of the estimates of waste to be disposed and the time for disposal is given in the table below. As discussed below, there will be lighter loads, thus a slightly lower dose rate for the drivers, but more total shipments than was estimated in the 2001 request. Because of

the increase in total waste, there will also be slight increases in dose rate to the landfill workers and postulated resident farmer compared to the 2001 estimates.

<b>Table 1. Comparison of Waste Estimates</b>		
Item	2001	2004
Total Waste	38.3 million kg (84.5 million lbs)	51.3 million kg (113 million lbs)
Rad Waste (remaining)	38.3 million kg (84.5 million lbs)	22.1 million kg (48.7 million lbs)
PCB Waste	0	1.4 million kg (3 million lbs)
Total shipping time	1 year	3 years

Review Scope:

The purpose of this EA is to assess the environmental impacts of CE's request to modify its existing authority to dispose of low-contaminated waste in a licensed landfill that would allow it to dispose of similar waste that is also contaminated with PCBs in another landfill licensed to receive PCBs. The scope of this EA is limited to evaluating potential environmental effects due to the longer shipping distance to the PCB-licensed landfill.

Identification of the Proposed Action:

The proposed action would approve the disposal of BRP Plant demolition debris that could contain trace quantities of licensed materials and PCB at a landfill licensed by the State of Michigan and the (EPA) to accept PCBs. An approval would also exempt the low-contamination material from further Atomic Energy Act (AEA) and NRC licensing requirements. The material comprises structural steel coated with PCB-contaminated paint, potentially including exterior steel from the containment building, classified by the EPA as PCB bulk product waste, originating from decommissioning activities. The existing radiological survey process will be used to determine if the debris is acceptable for landfill disposal. The licensed disposal site is located approximately 445 km (275 mi) from Big Rock Point. Landfill design and

institutional controls for this facility are equal or more restrictive than the requirements placed on a State of Michigan licensed Type II landfill currently used.

The proposed action is in accordance with the licensee's application requesting approval dated September 15, 2004.

The Need for the Proposed Action:

The proposed action is needed to dispose of structural steel coated with PCB-contaminated paint, potentially including exterior steel from the containment building, classified by the EPA as PCB bulk product waste, that may contain trace quantities of licensed material in a landfill licensed by the State of Michigan and EPA to accept PCBs prior to license termination. Currently, the BRP Plant is authorized to dispose of material at a State of Michigan Type II landfill. However, this landfill is not licensed to accept PCBs. Therefore, BRP is seeking to modify its existing §20.2002 authorization granted in 2002, so it can dispose of materials with PCB-contaminated paint in a landfill licensed to receive it.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action, and concludes that the environmental impacts of disposing up to 1.4 million kilograms (3 million pounds) of painted structural steel in which non-liquid PCBs are contained within the dried paint matrix, at a disposal facility licensed to accept PCB waste, are bounded by the previous EA (ADAMS Accession No. ML013370344). Adherence to the radiological survey process ensures that the potential radiological dose posed by the demolition debris to a transport worker, a landfill worker, or a member of the public is conservatively estimated at less than 10  $\mu\text{Sv}/\text{yr}$  (1 mrem/yr). Because of the lighter loads, the transportation worker scenario results in revised doses of 3.20  $\mu\text{Sv}/\text{yr}$  (0.320 mrem/yr), for a driver to the current State of Michigan licensed Type II landfill, and 1.78  $\mu\text{Sv}/\text{yr}$  (0.178 mrem/yr) for a driver to the alternate licensed PCB landfill. The landfill worker scenario results in revised doses of 2.91  $\mu\text{Sv}/\text{yr}$  (0.291 mrem/yr) for

a worker at the current State of Michigan licensed Type II landfill, and 0.182  $\mu\text{Sv}/\text{yr}$  (0.0182 mrem/yr) for a worker at the alternate licensed PCB landfill because of the small amount of radioactive waste to be disposed at this landfill. The calculated residential doses at the landfills are 0.178  $\mu\text{Sv}/\text{yr}$  (0.0178 mrem/yr) for a resident living at the Type II landfill site, and 0.01  $\mu\text{Sv}/\text{yr}$  (0.001 mrem/yr) for a resident living at the licensed PCB landfill site. Disposal of the demolition debris in the manner proposed is protective of public health and safety, is consistent with as low as reasonably achievable, complies with EPA requirements, and is the most cost-effective alternative.

The proposed action and attendant exemption of the material from further AEA and NRC licensing requirements will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not involve any historic sites. It does not affect nonradiological plant effluents and, because the waste will be disposed in a facility licensed to receive PCBs, it has no other environmental impacts. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

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

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

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in handling the

debris as low level radioactive waste and shipping it to a low level waste facility. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in BRP's Environmental Report for Decommissioning, dated February 27, 1995, or in the "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (NUREG-0586, Supplement 1).

Agencies and Persons Consulted:

On December 29, 2004, the staff consulted with Mr. Pete Quackenbush of the Michigan Department of Environmental Quality, Waste and Hazardous Materials Division regarding the environmental impact of the proposed action. The State had no comments.

**III. 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.

**IV. Further Information**

For further details with respect to the proposed action, see the licensee's letter dated September 15, 2004 (ADAMS Accession No. ML042640208). As of October 25, 2004, the NRC initiated an additional security review of publicly available documents to ensure that potentially information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for

review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209. 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 (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System's (ADAMS) Public Library component on the NRC Web site, <http://www.nrc.gov> (the Public Electronic Reading Room). 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 at [pdr@nrc.gov](mailto:pdr@nrc.gov).

Dated at Rockville, Maryland, this 11<sup>th</sup> day of January, 2005.

FOR THE NUCLEAR REGULATORY COMMISSION

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