

7.0 Environmental Impacts of Decommissioning

Environmental issues associated with decommissioning, which result from continued plant operation during the renewal term, are discussed in the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (GEIS), NUREG-1437, Volumes 1 and 2 (NRC 1996, 1999).^(a) The GEIS includes a determination of whether the analysis of the environmental issues could be applied to all plants and whether additional mitigation measures would be warranted. Issues were then assigned a Category 1 or a Category 2 designation. As set forth in the GEIS, Category 1 issues are those that meet all of the following criteria:

- (1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics.
- (2) A single significance level (i.e., SMALL, MODERATE, or LARGE) has been assigned to the impacts (except for collective offsite radiological impacts from the fuel cycle and from high-level waste and spent fuel disposal).
- (3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.

For issues that meet the three Category 1 criteria, no additional plant-specific analysis is required unless new and significant information is identified.

Category 2 issues are those that did not meet one or more of the criteria of Category 1, and therefore, additional plant-specific review of these issues is required. No Category 2 issues are related to decommissioning the R.E. Ginna Nuclear Power Plant (Ginna).

Category 1 issues in Table B-1 of 10 CFR Part 51, Subpart A, Appendix B, that are applicable to Ginna decommissioning following the renewal term are listed in Table 7-1. In its Environmental Report (ER) (RG&E 2002), Rochester Gas and Electric Corporation (RG&E) stated “no new information exists for the issues that would invalidate the GEIS conclusions.” The staff has not identified any new and significant information during its independent review of the Ginna ER (RG&E 2002), the staff’s site visit, the scoping process, discussions with other agencies, or its evaluation of other information. Therefore, the staff concludes that there are no impacts related to these issues beyond those discussed in the GEIS. For all of these issues,

(a) The GEIS was originally issued in 1996. Addendum 1 to the GEIS was issued in 1999. Hereafter, all references to the “GEIS” include the GEIS and its Addendum 1.

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1 the staff concluded in the GEIS that the impacts are SMALL, and plant-specific mitigation
2 measures are not likely to be sufficiently beneficial to be warranted.

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4 **Table 7-1.** Category 1 Issues Applicable to Decommissioning of R.E. Ginna Nuclear
5 Power Plant Following the Renewal Term
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ISSUE – 10 CFR Part 51, Subpart A, Appendix B, Table B-1	GEIS Section
DECOMMISSIONING	
Radiation Doses	7.3.1; 7.4
Waste Management	7.3.2; 7.4
Air Quality	7.3.3; 7.4
Water Quality	7.3.4; 7.4
Ecological Resources	7.3.5; 7.4
Socioeconomic Impacts	7.3.7; 7.4

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16 A brief description of the staff's review and the GEIS conclusions, as codified in 10 CFR
17 Part 51, Subpart A, Appendix B, Table B-1, for each of the issues follows:

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19 • Radiation doses. Based on information in the GEIS, the Commission found that

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21 Doses to the public will be well below applicable regulatory standards regardless
22 of which decommissioning method is used. Occupational doses would increase
23 no more than 1 man-rem [0.01 person-Sv] caused by buildup of long-lived
24 radionuclides during the license renewal term.

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26 The staff has not identified any new and significant information. Therefore, the staff
27 concludes that there are no radiation doses associated with decommissioning following
28 license renewal beyond those discussed in the GEIS.

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30 • Waste management. Based on information in the GEIS, the Commission found that

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32 Decommissioning at the end of a 20-year license renewal period would generate
33 no more solid wastes than at the end of the current license term. No increase in
34 the quantities of Class C or greater than Class C wastes would be expected.

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36 The staff has not identified any new and significant information. Therefore, the staff
37 concludes that there are no impacts of solid waste associated with decommissioning
38 following the license renewal term beyond those discussed in the GEIS.

- 1 • Air quality. Based on information in the GEIS, the Commission found that

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3 Air quality impacts of decommissioning are expected to be negligible either at
4 the end of the current operating term or at the end of the license renewal term.

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6 The staff has not identified any new and significant information. Therefore, the staff
7 concludes that there are no impacts of license renewal on air quality during
8 decommissioning beyond those discussed in the GEIS.

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10 • Water quality. Based on information in the GEIS, the Commission found that

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12 The potential for significant water quality impacts from erosion or spills is no
13 greater whether decommissioning occurs after a 20-year license renewal period
14 or after the original 40-year operation period, and measures are readily available
15 to avoid such impacts.

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17 The staff has not identified any new and significant information. Therefore, the staff
18 concludes that there are no impacts of license renewal on water quality during
19 decommissioning beyond those discussed in the GEIS.

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21 • Ecological Resources. Based on information in the GEIS, the Commission found that

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23 Decommissioning after either the initial operating period or after a 20-year
24 license renewal period is not expected to have any direct ecological impacts.

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26 The staff has not identified any new and significant information. Therefore, the staff
27 concludes that there are no impacts of license renewal on ecological resources during
28 decommissioning beyond those discussed in the GEIS.

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30 • Socioeconomic Impacts. Based on information in the GEIS, the Commission found that

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32 Decommissioning would have some short-term socioeconomic impacts. The
33 impacts would not be increased by delaying decommissioning until the end of a
34 20-year relicense period, but they might be decreased by population and
35 economic growth.

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37 The staff has not identified any new and significant information. Therefore, the staff
38 concludes that there are no impacts of license renewal on the socioeconomic impacts of
39 decommissioning beyond those discussed in the GEIS.

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1 **7.1 References**

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3 10 CFR Part 51. Code of Federal Regulations, Title 10, *Energy*, Part 51, “Environmental
4 Protection Regulations for Domestic Licensing and Related Regulatory Functions.”

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6 Rochester Gas and Electric Corporation (RG&E). 2002. *R.E. Ginna Nuclear Power Plant*
7 *Application for Renewed Operating License, Appendix E – Environmental Report*. Rochester,
8 New York.

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10 U.S. Nuclear Regulatory Commission (NRC). 1996. *Generic Environmental Impact Statement*
11 *for License Renewal of Nuclear Plants*. NUREG-1437, Volumes 1 and 2, Washington, D.C.

12
13 U.S. Nuclear Regulatory Commission (NRC). 1999. *Generic Environmental Impact Statement*
14 *for License Renewal of Nuclear Plants, Main Report*, “Section 6.3 – Transportation, Table 9.1,
15 Summary of findings on NEPA issues for license renewal of nuclear power plants, Final
16 Report.” NUREG-1437, Volume 1, Addendum 1, Washington, D.C.
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