Department of Energy

APPENDIX II TO PART 960—NRC AND EPA REQUIREMENTS FOR PRECLOSURE REPOSITORY PERFORMANCE

Under proposed 40 CFR part 191, subpart A—Environmental Standards for Management and Storage, Section 191.03. “Standards for Normal Operations,” specifies: (1) That operations should be conducted so as to reduce exposure to members of the public to the extent reasonably achievable, taking into account technical, social, and economic considerations; and (2) that, except for variances permitted for unusual operations under Section 191.04 as an upper limit, normal operations shall be conducted in such a manner as to provide reasonable assurance that the combined annual dose equivalent to any member of the public due to: (i) operations covered by 40 CFR part 190, (ii) planned discharges of radioactive material to the general environment from operations covered by this subpart, and (iii) direct radiation from these operations; shall not exceed 25 millirems to the thyroid, or 25 millirems to any other organ.

The guidelines will be revised as necessary after the adoption of final regulations by the EPA.

The implementation of 40 CFR part 191, subpart B is required by 10 CFR 60.112. 10 CFR 60.113 establishes minimum conditions to be met for engineered components and ground-water flow; specifically: (1) Containment of radioactive waste within the waste packages will be substantially complete for a period to be determined by the NRC taking into account the factors specified in 10 CFR 60.113(b) provided that such period shall be not less than 300 years nor more than 1,000 years after permanent closure of the geologic repository; (2) the release rate of any radionuclide from the engineered barrier system following the containment period shall not exceed one part in 100,000 per year of the inventory of that radionuclide calculated to be present at 1,000 years following permanent closure, or such other fraction of the inventory as may be approved or specified by the NRC, provided that this requirement does not apply to any radionuclide which is released at a rate less than 0.1% of the calculated total release rate limit. The calculated total release rate limit shall be taken to be one part in 100,000 per year of the inventory of radioactive waste originally emplaced in the underground facility that remains after 1,000 years of radioactive decay; and (3) the geologic repository shall be located so that pre-waste-emplacement ground-water travel time along the fastest path of likely radionuclide travel from the disturbed zone to the accessible environment shall be at least 1,000 years or such other travel time as may be approved or specified by the NRC.

The guidelines will be revised as necessary to ensure consistency with 10 CFR part 60.

APPENDIX III TO PART 960—APPLICATION OF THE SYSTEM AND TECHNICAL GUIDELINES DURING THE SITING PROCESS

1. This appendix presents a table that specifies how the guidelines of subparts C and D are to be applied at certain decision points of the siting process. The decision points, as referenced in the table, are defined as follows:

“Potentially acceptable” means the decision point at which a site is identified as potentially acceptable.