CHAPTER 5
CUMULATIVE IMPACTS

This chapter addresses the potential for cumulative environmental impacts resulting from the implementation of Alternatives A or B and other past, present, and reasonably foreseeable future actions in the region around the West Valley Demonstration Project site.

Council on Environmental Quality regulations implementing the procedural provisions of NEPA require federal agencies to consider the cumulative impacts of a proposal (40 CFR 1508.25(c)). A cumulative impact on the environment is the impact that results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). This type of an assessment is important because significant cumulative impacts can result from several smaller actions that by themselves do not have significant impacts.

The Western New York Nuclear Service Center is located in a rural area with no other major industrial or commercial centers surrounding it. Land use within 8 kilometers (5 miles) of the site is predominantly agricultural (active and inactive) and forestry uses. The industries near the site are light industrial and commercial (either retail or service-oriented). A field review of an 8-kilometer (5-mile) radius did not indicate the presence of any industrial facilities that would present a hazard in terms of safe operation of the site or would have any potential to impact the environment around WVDP (see Section 3.5). Thus, there is no potential for cumulative impacts from other present or reasonably foreseeable future actions, other than from activities at the site.

The WVDP site and the surrounding area in Cattaraugus County are in attainment with the National Primary and Secondary Ambient Air Quality Standards and New York State air quality standards. WVDP's current emissions of criteria pollutants are well below the New York State Department of Environmental Conservation's annual emission. The estimate of future emissions of criteria pollutants under all alternatives demonstrates that the site will continue to operate within its permit limits, with emissions that, even when conservatively combine with Buffalo background levels, would all be below federal and New York State standards (see Section 3.3.2).

Past fuel processing and radioactive waste disposal operations at the Center have resulted in airborne and liquid releases, some soil and groundwater contamination, limited sediment contamination in the creeks, and some detectible contamination off the site. The net impact from these past operations to the regional population near the Center has been estimated to be approximately 13 person-rem. During reprocessing operations, the estimated cumulative exposure to the workforce was about 4,200 person-rem (JAI 1980). As demonstrated in Section 4.0, the potential radiation dose to workers and the public, within 80 kilometers (50 miles), from the implementation of the No Action Alternative, Alternatives A or B, would be far lower than that experienced in the past (2.5 person-rem), and the resulting cumulative impact would be very small (less than one projected latent cancer fatality). There are ongoing operations at the WVDP site. These activities are those included in the No Action Alternative and Alternatives A and B and involve active hazardous waste management, operational support, surveillance, and oversight and other routine operations. These activities result in exposure of workers and the public to very low doses of radiation above background levels each year (0.1 percent of natural background annual exposure for the maximally exposed member of the public). The dose from ongoing operations, when added to the expected dose from the implementation of Alternatives A or B, would remain very low.

All ongoing operations that would contribute to potential impacts have been incorporated into the impact analyses provided in this EIS that demonstrate very small impacts. There are no other ongoing or currently planned activities at the WVDP site that would contribute to site cumulative impacts. In the future, DOE or the New York State Energy Research and Development Authority may propose decommissioning and/or long-term stewardship activities that could impose environmental impacts at the site. However, at this time it is not known or reasonable to speculate what, if any, contributions future decontamination and/or long-term stewardship actions may make to cumulative impacts.

It is reasonably foreseeable that waste generated as part of decommissioning and/or long-term stewardship activities would also be shipped offsite. Although the specific volume cannot be known at this time and would vary depending on the alternative selected, it is expected that the volume to be shipped offsite would be analyzed in the Decommissioning and/or Long-Term Stewardship EIS.

The shipment of radioactive wastes from the WVDP site to the disposal sites has the potential to affect people nationwide located along the highway and rail corridors between the site and the offsite disposal facilities. These potential impacts include the direct effect of radiation exposure to people using, working, and residing along the selected corridors and traffic accidents. Transportation workers and the general public using, working, and residing along the selected transportation corridors could also be affected by shipments of radioactive waste or materials from other sites. This situation would be particularly true for individuals residing along the major interstate highways used as access routes to the waste disposal sites. However, the potential cumulative impacts would be small, less than one projected latent cancer fatality in the affected population for the 10-year duration of the proposed actions (see Section 4.0). Further, there would be relatively few shipments of radioactive waste, (average of 25 trucks and/or 8 railcars per year) from the WVDP site, in comparison to other radioactive waste and materials shipments and truck shipments. Additionally, the actions contemplated in this EIS are also addressed in other NEPA documents such as the WM PEIS (DOE 1997a) and WIPP Supplemental EIS II (DOE 1997b) as listed in Section 1.7. These documents include analyses of impacts associated with transportation of waste to the receiving sites identified in this EIS and potential cumulative impacts at those sites.

REFERENCES

DOE (U.S. Department of Energy), 1997a. *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (Volumes 1 through 5)*, DOE/EIS-0200-F, Washington, DC, May.

DOE (U.S. Department of Energy), 1997b. *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement,* DOE/EIS-0026-S-2, Washington, DC, September.

JAI (E.R. Johnson Associates, Inc.), 1980. *Review of the Operating History of the Nuclear Fuel Service, Inc., West Valley, New York Irradiated Fuel Processing Plant*, JAI-161, Reston, Virginia, December 26.