



# Impacts

## Introduction

Impacts of the Site-wide Environmental Impact Statement alternatives are assessed in the following resource areas: land use and visual resources, site infrastructure, traffic and transportation, air quality, water resources, ecological resources, socioeconomics, health and safety and environmental justice, accidents, and waste management.

## Land Use and Visual Resources

- Construction of the Uranium Processing Facility (UPF) and Complex Command Center (CCC) would affect approximately 42 acres of previously disturbed land (35 acres for the UPF and 7 acres for the CCC).
- The Y-12 National Security Complex (Y-12) would remain a highly developed area with industrial appearance.

## Site Infrastructure

- Y-12 energy usage and other infrastructure requirements should continue to decrease by approximately 2 to 5 percent per year as Y-12 downsizes further.
- A smaller UPF would reduce electricity and water use by 60 percent compared to current usage.

## Traffic and Transportation

- Construction activities would increase traffic similar to that experienced during construction of the Highly Enriched Uranium Materials Facility (HEUMF), which did not change the level of service on area roads.

## Air Quality

- No significant new quantities of criteria or toxic pollutants would be generated from any existing or new facilities (UPF and CCC).
- With respect to greenhouse gas emissions, all alternatives would result in less than one percent of state-wide CO<sub>2</sub> emissions in Tennessee.

## Water Resources

- No significant changes in water usage among alternatives; UPF would reduce water usage through more efficient operations.

## Ecological Resources

- No significant impact on biological resources because all activities would be located in previously disturbed or heavily industrialized portions of Y-12.

## Socioeconomics

- Construction activities would have a similar impact on socioeconomic characteristics as the recently-completed HEUMF construction.
- Once UPF is operational, Y-12 workforce would be reduced by approximately 750 workers, which is approximately 11 percent of the total Y-12 workforce. These reductions are expected to be met through normal attrition/retirements, as about 50 percent of the work force at Y-12 is eligible to retire within the next 5 years.

## Health and Safety and Environmental Justice

- Under all alternatives, radiological doses to the public and workers would be well below regulatory limits and limits imposed by DOE Orders. For all alternatives, radiological impacts would be expected to cause less than one latent cancer fatality annually to the 50-mile population surrounding Y-12.
- No greater impact on minority or low-income populations than the population as a whole.
- UPF would reduce worker radiological doses by 60 percent or more.

## Accidents

- UPF would decrease the overall Y-12 facility accident risks by consolidating operations and materials into a modern facility, thus reducing the accident risks by phasing out those older facilities.
- Accident consequences and risks would be very small (less than one latent cancer fatality) for all alternatives.

## Waste Management

- Under all alternatives, the waste management treatment and disposal capabilities at Y-12 would be adequate to handle wastes generated by operations.

### For further information or to submit comments, contact:

Pam Gorman  
Y-12 SWEIS Document Manager  
800 Oak Ridge Turnpike  
Suite A-500  
Oak Ridge, TN 37830

Phone: (865) 576-9903  
Fax: (865) 483-2014  
Email: [y12sweis.comments@tetrattech.com](mailto:y12sweis.comments@tetrattech.com)  
Websites: [www.y12sweis.com](http://www.y12sweis.com)  
[www.y12.doe.gov](http://www.y12.doe.gov)

Comments must be received or postmarked by the end of the comment period, January 29, 2010.

