

- Experimental Breeder Reactor-II Blanket Treatment Project; and
- Additional Increased Rack Capacity for Building 666.

### 3.2.2 Idaho National Engineering Laboratory Waste Management Program

The waste management program at the Idaho National Engineering Laboratory is accomplished through planning, coordination, and direction of functions related to generation, minimization, handling, treatment, storage, transportation, and disposal of waste and spent nuclear fuel, as well as associated surveillance and maintenance activities. The waste management program ensures that current and future waste management practices minimize any potentially adverse environmental impacts. The following discussion describes by waste type the selected alternative, the Modified Ten-Year Plan, alternative.

**3.2.2.1 High-Level Radioactive Waste.** The Department's decision for liquid high-level waste is to convert the high-level liquid waste to calcine (a stable, solid waste form). The Department has decided to resume operation of the New Waste Calcining Facility to convert the high-level liquid and sodium-bearing liquid waste to calcine prior to further treatment. The conversion to calcine will allow the Idaho National Engineering Laboratory to meet current requirements of a December 9, 1991 consent order with the State of Idaho and the Environmental Protection Agency to cease use of the existing liquid waste storage tanks without building new tanks. The Department proposes to construct a facility to treat the calcined high level waste (and any remaining liquid waste), in accordance with the Resource Conservation and Recovery Act, on a schedule to be negotiated with the State of Idaho under the Federal Facility Compliance Act.

The Department has selected a technology to be tested for potential use in a treatment facility. The technology selected is radionuclide partitioning for radioactive liquid and calcine waste treatment, grout for immobilizing the resulting low activity waste stream, and glass (vitrification) for immobilizing the resulting high-activity waste stream. For more information on this technology, see the Waste Immobilization Facility project description in Volume 2, Appendix C, of the Environmental Impact Statement.

There are two Idaho National Engineering Laboratory projects that will be implemented as a result of the decision (see Appendix for descriptions):

- Tank Farm Heel Removal Project; and
- Calcine Transfer Project.

Other projects which are planned are listed below. Decisions regarding these projects will be made in the future pending further project definition, funding priorities, or appropriate review under the National Environmental Policy Act. Descriptions of these projects can be found in Volume 2, Appendix C, of the Environmental Impact Statement.

- Waste Immobilization Facility;
- Radioactive Scrap/Waste Facility (Argonne National Laboratory-West); and
- Test Area North Pool Stabilization Project.

**3.2.2.2 Transuranic Waste.** The Department's decision will result in possible acceptance of some off-site transuranic waste from other Department facilities for treatment (depending upon future decisions made as a result of the Department of Energy *Waste Management Programmatic Environmental Impact Statement*). The Idaho National Engineering Laboratory will construct treatment facilities necessary to comply with the Federal Facility Compliance Act. Treatment of transuranic waste at a minimum will be for the purpose of meeting waste acceptance criteria for disposal at the Waste Isolation Pilot Plant (near Carlsbad, New Mexico) and will occur on a schedule to be negotiated with the State of Idaho.

Nominal additional quantities of transuranic waste will continue to be generated from on-site operations. The Site Treatment Plans developed under the Federal Facility Compliance Act may require that some types of waste be shipped from one Department of Energy site to another to take advantage of existing or future regionalized treatment capability. Off-site waste would be received depending on decisions based on: (1) Site Treatment Plan consent orders negotiated under the Federal Facility Compliance Act; and (2) the *Waste Management Programmatic Environmental Impact Statement*. Generally, after treatment, the waste residuals would be returned to the generator or transported to an approved off-site disposal facility (assumed to be the Waste Isolation Pilot Plant).

Projects for retrieving, characterizing, and treating transuranic waste will prepare the waste for transportation and disposal in a repository or for on-site disposal (for waste that can meet the on-site disposal performance criteria).

Projects that will be continued at the Idaho National Engineering Laboratory

as a result of the decision (see Appendix for descriptions) are noted below:

- Transuranic Storage Area Enclosure and Storage Project; and
- Waste Characterization Facility.

Other projects which are planned are listed below. Decisions regarding these projects will be made in the future pending further project definition, funding priorities, or appropriate review under the National Environmental Policy Act. Descriptions of these projects can be found in Volume 2, Appendix C, of the Environmental Impact Statement.

- Private Sector Alpha-Contaminated Mixed Low-Level Waste Treatment;
- Radioactive Waste Management Complex Modifications to Support Private Sector; Treatment of Alpha-Contaminated Mixed Low-Level Waste;
- Idaho Waste Processing Facility;
- Mixed/Low-Level Waste Disposal Facility; and
- Plasma Hearth Process Project.

**3.2.2.3 Mixed Low-Level Radioactive Waste.** Pursuant to the selected alternative, the Idaho National Engineering Laboratory could accept off-site mixed low-level waste for treatment. This decision is subject to agreements being negotiated pursuant to the Federal Facility Compliance Act and the decisions resulting from the Department of Energy *Waste Management Programmatic Environmental Impact Statement*. If mixed low-level waste from other sites is accepted for treatment at the Idaho National Engineering Laboratory, the waste residuals would be returned to the generator or transported to an approved off-site disposal facility.

For the near term, stored and newly generated mixed low-level waste at the Idaho National Engineering Laboratory will be treated at the Waste Experimental Reduction Facility Incinerator (restart), the Nonincinerable Mixed Waste Treatment project, and the Sodium Processing Facility through generator treatment plans developed under 40 CFR 262.34, *Standards Applicable to Generators of Hazardous Waste—Accumulation Time*. Lead contaminated with radioactivity will be recycled at the Idaho National Engineering Laboratory and off-site.

The following projects will be implemented at the Idaho National Engineering Laboratory as a result of the decision (see Appendix for descriptions):

- Waste Experimental Reduction Facility Incineration;
- Nonincinerable Mixed Waste Treatment Project; and
- Sodium Processing Project.