

Y12

EIA

The proposed site for construction of the Building 9215 expansion is a parcel of land located west of Buildings 9212 and 9998 and north of Building 9215 as shown in Figure S.3.2.3–3. This parcel has no major permanent structures and is currently occupied by trailers and temporary facilities. The proposed site is on high ground within the PIDAS, not susceptible to flooding or stormwater runoff. The expansion of Building 9215 for HEU storage would require approximately 0.8 ha (2 acres) to accommodate the construction activities and the building expansion footprint. Personnel in the existing trailers would be relocated and the trailers would be removed and salvaged, other temporary facilities would be relocated and utilities and other infrastructure modified to support the construction activities and operation of the new expansion.

S.3.2.4 *Alternative 3 (No Action - Planning Basis Operations Alternative Plus Special Materials Mission Alternative)*

This alternative includes the No Action - Planning Basis Operations Alternative plus a new Special Materials Complex at one of three candidate sites. The proposed action is to construct and operate a new Special Materials Complex which would enable Y-12 to ensure efficient production of adequate quantities of special materials for all anticipated scenarios considered for the enduring nuclear weapons stockpile while providing for improved worker health and safety. A key component of the proposed Special Materials Complex is the construction of a new Beryllium Facility to house all beryllium production operations at Y-12. Facility design would incorporate strategies that replace the current administrative safety and health controls and personal protective equipment with engineered controls. A discussion of the alternatives and the candidate sites for the proposed new Special Materials Complex is provided in the following sections.

S.3.2.4.1 *No Action - Planning Basis Operations Alternative Plus Construct and Operate New Special Materials Complex*

The proposed Special Materials Complex shown in Figure S.3.2.4–1 would house a number of separate processing operations and the support facilities to serve each. These operations would be housed in distinct areas to ensure that the safety basis of the operation of each is independent of the other operation. Included in the Special Materials Complex would be:

- Beryllium production operations at Y-12
- A facility for purification of special materials
- A manufacturing/warehouse facility to produce special materials and provide for storage of new materials and parts
- An isostatic press for forming blanks for machining -DAP
- A core support structure to house common support functions for the complex

The facilities would be attached to one another with weather-protected walkways to facilitate the flow of materials.

Special Materials Complex Candidate Sites

Site 1. Site 1 for the proposed Special Materials Complex is approximately 8 ha (20 acres) and is located northwest of Building 9114 and on the north side of Bear Creek Road. The Site is situated on the drainage divide of the East Fork Poplar Creek and Bear Creek watersheds. Approximately 50 percent of the Site is currently cleared at the base of Pine Ridge and the other 50 percent is wooded on the slope of the ridge. The site area has been used for a construction lay-down area in the past. Potential construction problems associated with legacy contamination from prior operations support activities are not expected. This Site is outside the existing Y-12 Plant PIDAS. Figure S.3.2.4-2 shows the location for Site 1 relative to other buildings at Y-12. Site 1 represents a large Site with no permanent building structures and minimal infrastructure. The topography of the Site would require a moderate amount of earthwork to prepare the Site for construction.

Site 1 preparation for the proposed new Special Materials Complex involves site design, relocation of some existing utilities (e.g., underground pipelines, communications lines, and power lines), and extension of utilities to the new facilities. The PIDAS would not be expanded for this facility, since it is a nonnuclear facility. A fence would be erected to control access.

Site 2. Site 2 for the proposed Special Materials Complex is approximately 4 ha (10 acres) and is located at the Y-12 Scrap Metal Yard southeast of Building 9114 and east of the westernmost portion of the Y-12 PIDAS fence. Figure S.3.2.4-2 shows the location of Site 2 relative to other buildings at Y-12.

Site 2 preparation would include site design, relocation of existing utilities (e.g., lights, underground water lines, storm sewers, steam lines), two structures, and a portion of the Y-12 Scrap Metal Yard. The existing Y-12 Plant PIDAS would not be affected since Site 2 is entirely within the PIDAS. However, a security fence would be erected to isolate the work during construction.

Site 3. Site 3 for the proposed Special Materials Complex (see Figure S.3.2.4-2) is the same site as Site B for the proposed HEU Materials Facility described earlier. The previous discussion of construction activities associated with the HEU Materials Facility would also apply to the construction of the proposed Special Materials Complex at Site 3, except that the PIDAS would not be expanded for the nonnuclear Special Materials Complex facilities.

S.3.2.5 Alternative 4 (No Action - Planning Basis Operations Alternative Plus HEU Materials Facility Plus Special Materials Complex)

This alternative includes the No Action - Planning Basis Operations Alternative plus construction and operation of a New HEU Materials Facility at one of two proposed sites and construction and operation of a New Special Materials Complex at one of three proposed sites.