

ROCKY FLATS PLANT, TRANSPORT MODIFICATION
CENTER
(Building 440)
North of Cactus Ave., approximately 400' east of Third St.
Golden vicinity
Jefferson County
Colorado

HAER No. CO-83-Z

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
1849 C St. NW
Washington, DC 20240

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ROCKY FLATS PLANT,
TRANSPORT MODIFICATION CENTER HAER No. CO-83-Z
(Rocky Flats Plant, Building 440)

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 440 is located inside the 400 Area security fence, north of Cactus Avenue, approximately 400' east of Third Street.

Significance: Building 440 is a primary contributor to the Rocky Flats Plant historic district, associated with the United States (U.S.) strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. In the early 1970s, Building 440 was used to modify and repair vehicles to meet specific U.S. Department of Energy (USDOE) requirements for transport of special nuclear materials and radioactive wastes. A Plant employee is credited with developing the concept of modifying railroad cars, semi-truck trailers, and escort vehicles to carry radioactive waste materials for storage and disposal and to transport weapons components to the Pantex Plant. Vehicle modification work in Building 440 continued until 1994.

Description: Building 440 is comprised of several multi-height structures attached to each other, forming a building of variable height. Room 105, 106, 112, 113, 114, and 123 are the primary rooms contained in Building 440, and are discussed in more detail below. The northwest portion of Building 440 consists of four high-bay, corrugated-metal, prefabricated structures linked together. Each of these four prefabricated structures is constructed of rigid, tapered north-south steel bents, with no intermediate columns. The bents are cross-braced. Two one-story structures with shallow-pitched gable roofs form the eastern portion of Building 440. Two structures with medium-pitched gable roofs, and one flat-roofed, single-story area form the southwest portion of Building 440. The roof is corrugated metal decking, supported by cold-formed steel purlins, insulated with fiberglass and vapor-barrier facings.

The east and west portions of the building each have two metal overhead doors. The foundation contains spread footings connected by concrete grade beams. The exterior walls and some of the interior walls between the structures are metal sandwich-type panels with fiberglass insulation. Most of the interior walls are concrete masonry. The floors are on-grade concrete slabs.

The outline of the building measures 276' (east-west) x 142' (north-south), covering approximately 41,320 square feet. Two railroad spurs enter the building at the eastern end.

Room 106 contains a grid of wide flange steel beams 10' above the floor. These beams, originally used to support weapons components awaiting shipment to the Pantex Plant in Amarillo, Texas, currently support electrical bus ducts and fluorescent light fixtures.

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A 5-ton bridge crane is located in Room 112. Unlike other bridge cranes at the Rocky Flats Plant (Plant), the rails for the crane in Room 112 are supported on steel columns, independent of the building. The crane was added after the building was constructed to aid in the modification of rail cars.

Room 114 is a railcar bay. The railroad tracks and the majority of the floor slab are approximately 5' lower than the main building floor. The tracks enter the room from the east; an entry dock is located at the north end. Gantry cranes present in Rooms 105 and 114 were used to move equipment and materials used in the modification of safe secure transports.

Industrial-sized paint booths are located in Rooms 113 and 123. These paint booths are large enough to hold a semi-truck trailer, and are equipped with special air vents to carry air in and out of the booths.

History: Building 440 was constructed in the late 1960s for production control and shipping of products for final assembly and wastes for disposal. Special nuclear materials and depleted uranium were staged and shipped out of this building by truck and railcar.

For a brief period, Building 440 was used as a general warehouse and storage area for non-nuclear construction and fabrication materials.

In the early 1970s, Building 440 was used to modify and repair vehicles to meet specific U.S. Department of Energy (USDOE) requirements for transport of special nuclear materials and radioactive wastes. Building 440 was expanded three times to include a railcar bay, a high bay, paint booths, storage areas, and locker rooms in support of transport modification efforts. A Plant employee, Walter Coven, is credited with developing the concept of modifying railroad cars, semi-truck trailers, and escort vehicles to carry radioactive waste materials for storage and disposal and to transport weapons components to the Pantex Plant. Armor, communication equipment, and comfort features were added to transport vehicles to aid personnel assigned to ensure the safe and secure movement of the cargo. Vehicle modification work in Building 440 continued until 1994, when the mission was transferred to another USDOE facility in Kansas City. Most of the original equipment associated with this activity has been shipped to other USDOE plants.

Railcars for material shipping were among the first types of transports modified in the building, followed by rail escort cars for personnel. The use of railcars was replaced by the use of specially modified tractor trailers called safe secure transports. The tractor trailers could take advantage of the highway system which offered increased flexibility in shipment schedules and routing, and also offered the possibility of evasive action, if necessary.

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Operations: Production processes in Building 440 included various welding, painting, machining, pipe fitting, metal working, and electrical work used to modify transports. Modification efforts focused on developing entry deterrents. Paint booths were used to coat fabricated, non-nuclear components and the transports. The gantry and 5-ton cranes were used to move materials associated with the transport modification effort.

Sources: Coven, Walter, employed at the Plant from 1955 to 1988 by the site contractor. Personal communication, January 1998.

Healy, Terry, employed at the Plant since 1976 by the site contractor. Personal communication, January 1998.

Roberts, Jim, employed at the Plant from 1967 to 1997 by the site contractor. Personal communication, January 1998.

Swenson, Peter, employed at the Plant since 1982 by the site contractor. Personal communication, December 1997.

United States Department of Energy. *Historical Release Report (HRR) (1994)*, by EG&G. Rocky Flats Plant Repository. Golden, Colorado, 1994.

United States Department of Energy. *Final Cultural Resources Survey Report (1995)*, by Science Applications International Corporation. Rocky Flats Repository. Golden, Colorado, 1995.

Weaver, Jack, employed at the Plant since 1961 by the site contractor. Personal communication, January 1998.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. (e²M), 1997. Judith Berryman, Ph.D., Archaeologist, e²M, 1997.