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In the past at Los Alamos National Laboratory (LANL), radiography for pit manufacturing and pit surveillance programs had been conducted at TA-8. Because of security concerns and difficulty meeting the stringent AB requirements for nuclear facilities, it was decided that TA-8 is no longer capable of supporting nuclear radiography operations, and to relocate these tasks to TA-55. Since a long-term facility for radiography capability could not be expected to be operational until after 2010, a fast-track interim radiography capability was required to bridge the programmatic performance gap until the construction of the permanent facility could be completed.

Merrick & Company received a contract to develop the criteria for the design and to develop the TA-55 Design Change Package (DCP) for the project. The location of the interim radiography project was a tunnel that connected PF-4 with PF-41. Included in the project was the extension of the PF-4 facility

Material Access Area (MAA) perimeter to incorporate the tunnel structure. This required the termination of the existing tunnel services from PF-41 and establishing new services as part of the PF-4 facility. As part of PF-4, the design of all modifications to the tunnel structure had to meet the requirements for Performance Category 3 (PC-3) and the design had to provide the necessary documentation to meet the criteria for Management Level 1 (ML-1). The installation of utility services, radiography equipment, and security equipment had to follow the requirements of the TA-55, PF-4 authorization (safety) basis. The controls for the tunnel HVAC system and pressure differential monitors were required to be connected to the existing PF-4 control system.

Merrick's design was developed in close coordination with the LANL Site Support Services (SSS) contractor and their principal subcontractor, JB Henderson Construction (JBH). Merrick's experience and

knowledge of LANL construction phase activities as performed by the SSS and JBH served the project well. Constructability review and issues related to decontamination, decommissioning, and demolition in an operational nuclear facility were critical to the project. Merrick's experience working with the SSS and JBH on prior projects translated into schedule and construction cost efficiencies. The design package included very specific details showing utility points of connection, routing, and test and inspection requirements appropriate to the ML-1 project and achievable by the constructors.

Merrick was also tasked to provide Title III services for the construction of the new facility. This work includes the review of submittals, preparation of responses to Requests for Information (RFIs), preparation of Field Change Requests (FCRs), preparation of Record Documents, and support for the Readiness Assessment.

