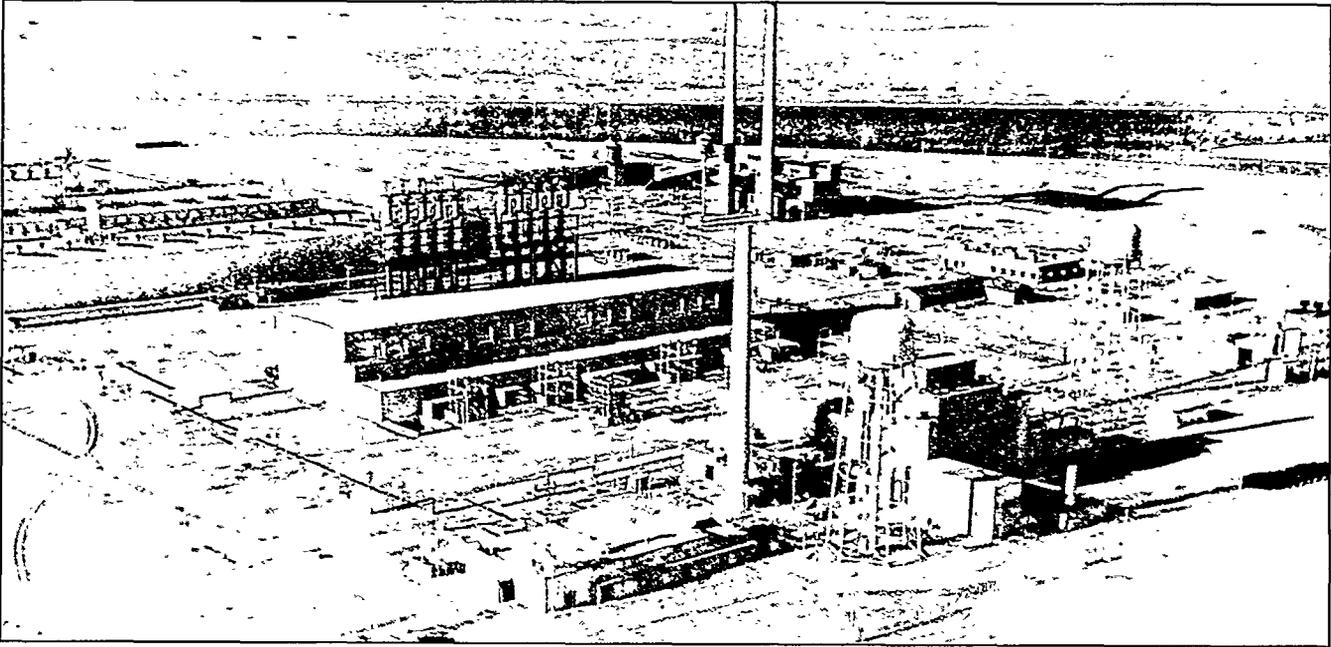


## Part IV:

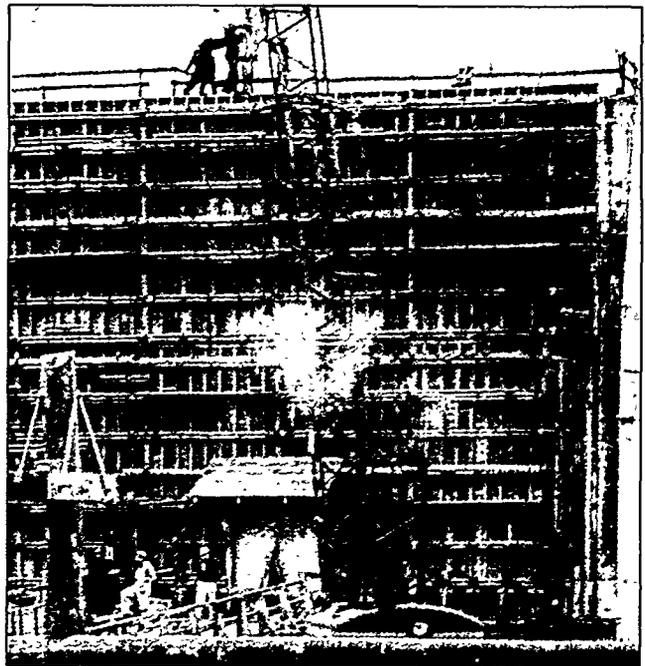


File D at Hanford. Pile in Foreground, Water Treatment Plant in Rear. Reprinted from Richard G. Hewlett and Oscar E. Anderson, Jr., *The New World, 1939-1946*, Volume I of *A History of the United States Atomic Energy Commission* (University Park: Pennsylvania State University Press, 1962).

### The Chemical Separation Buildings (Queen Marys)

Both 221T and 221U, the chemical separation buildings in the 200-West complex, were finished by December 1944. 221B, their counterpart in 200-East, was completed in spring 1945. Nicknamed Queen Marys by the workers who built them, the separation buildings were awesome canyon-like structures 800 feet long, 65 feet wide, and 80 feet high containing forty process pools. The interior had an eerie quality as operators behind thick concrete shielding manipulated remote control equipment by looking through television monitors and periscopes from an upper gallery. Even with massive concrete lids on the process pools, precautions against radiation exposure were necessary and influenced all aspects of plant design.<sup>38</sup>

Construction of the chemical concentration buildings (224-T, -U, and -B) was a less daunting task because relatively little radioactivity was involved, and the work was not started until very late 1944. The 200-West units were finished in early October, the East unit in February 1945. In the Queen Marys, bismuth phosphate carried the plutonium through the long succession of process pools. The



Chemical Separation Plant (Queen Mary) Under Construction at Hanford. Reprinted from Richard G. Hewlett and Oscar E. Anderson, Jr., *The New World, 1939-1946*, Volume I of *A History of the United States Atomic Energy Commission* (University Park: Pennsylvania State University Press, 1962).