## CONTENTS

Prologue I
Part 1: Three-Way Race
Part 2: Chain Reactions
PART 3: HOW TO BUILD AN ATOMIC BOMB
Part 4: Final Assembly 143
Epilogue
RACE TO TRINITY
Source Notes
QUOTATION NOTES
Acknowledgments
Photo Credits
INDEX

4

## PROLOGUE: MAY 22, 1950

## **HE HAD A FEW MORE MINUTES** to destroy seventeen years of evidence.

Still in pajamas, Harry Gold raced around his cluttered bedroom, pulling out desk drawers, tossing boxes out of the closet, and yanking books from the shelves. He was horrified. Everywhere he looked were incriminating papers a plane ticket stub, a secret report, a letter from a fellow spy.

Gold ripped the papers to shreds, carried two fistfuls to the bathroom, shoved them into the toilet, and flushed. Then he ran back to his bedroom, grabbed the rest of the pile, and stumbled on slippers down the stairs to the cellar, where he pushed the stuff to the bottom of an overflowing garbage can.

The doorbell rang.

Gold walked to the door. He took a few deep breaths, trying to slow his heartbeat, then opened the door and saw the men he expected: Federal Bureau of Investigation agents Scott Miller and Richard Brennan. They'd been questioning Gold for days, showing him pictures of known spies, demanding information about his connection to these people. Gold had admitted nothing, insisting he was what he appeared to be: a simple, hardworking chemist who lived with his father and brother, and had never been far from his Philadelphia home. Unconvinced, the FBI agents had come to search his house.

Gold led the way to his room. Agent Miller sat down at Gold's desk and started opening drawers, sifting through paper piles. Brennan went to work on the sagging bookshelves, packed tight with math and science volumes, and stacks of paperback novels.

Brennan flipped through a paperback, stopping to inspect something stamped on the inside cover: the name of a department store in Rochester, New York.

"What's this?" he asked Gold, holding up the open book.

"Oh, I don't know," Gold said, "must have picked it up on a used book counter somewhere. Lord knows where."

Then, from a desk drawer, Miller pulled a train schedule for the Washington-Philadelphia-New York-Boston passenger line. Another clue that Gold wasn't the homebody he'd described.

"What's this, Harry?" Miller asked.

"Goodness knows," Gold said, shrugging. "I probably picked it up when I went to New York." *This is bad*, he said to himself. *Bad, but not terrible*.

Then came the body blow.

Gold watched Brennan slide a thick, tattered copy of *Principles of Chemical Engineering* from the shelf. Nausea swelled Gold's throat as he saw a light brown, folded street map drop to the floor. To Gold, the map seemed to scream its title in the silent room: "New Mexico, Land of Enchantment."

Oh God, he thought.

"So you were never west of the Mississippi," said Brennan, bending down to lift the map. He opened it and saw, at the spot in Santa Fe where the Castillo Street Bridge crosses the Santa Fe River, an X marked in ink.

"How about this, Harry?" demanded Brennan.

Miller spun from the desk, stood, and watched Gold.

Gold needed to speak quickly, needed to offer an explanation. But he froze. "Give me a minute," he managed, falling heavily into his desk chair.

Brennan offered him a cigarette, which he took. Brennan lit it, and Gold drew deeply.

"A torrent of thoughts poured through my mind," Gold later said of this moment. The map could easily be explained—he'd just say he loved Western stories, which was true, and that, out of curiosity, he'd sent to a Santa Fe museum for the map. Surely they didn't keep records of such requests; no one could prove he was lying.

But then he thought about what would happen if he continued claiming innocence: "My family, people with whom I worked, and my friends whom I knew, my lifetime friends—they would all rally around me. And how horrible would be their disappointment, and the letdown, when finally it was shown who I really was."

Harry Gold had been living a double life for seventeen years. Overwhelmed by exhaustion, he turned to the FBI agents. They were still waiting for an answer.

"Yes, I am the man," Gold said.

He slumped a little lower in his chair.

"There is a great deal more to this story. It goes way back," he said. "I would like to tell it all."