Summary: In the final years of WWII, in the secret city of Los Alamos, Mary Rice, a brilliant physicist, has the ultimate chance to redeem a slumping career, taking part in the greatest scientific project of the century, until a moment of hesitation leads her to an act of treason.

Mary received two overseas calls, about one hour apart. The first was to prepare her for the second, whose purpose in turn was to tell her to pack her bags, if she was still interested in Tube Alloys, that is. Her lab mates dashed back and forth past her office window, sometimes lingering curiously, since word had spread through the Chicago Metallurgic Laboratory that another of their ranks had gotten "The Call," and would soon disappear.

"Well, cheeri-o, then," Sir James said.

"Alright, bye," Mary replied.

Mary set the telephone receiver onto its hook, and sat silently. She bit a loose clip of thumbnail, then moved on to her forefinger, but there was nothing there left for her to bite. By now, three of her American assistants, all young men and PhD candidates at the University observed her, expectantly, unashamedly, through the window.

She put on a gap-toothed smile, and raked frail fingers through her hair which, since relocating to America had lightened — from the color of bits of chocolate, to tea and milk, and would fade to caramel under the New Mexico sun.

"You'll need an alias," Sir James said without looking up from the leather-bound portfolio spread on the table between them. It was all he said to her since meeting up in the

dining car — he from First Class, she from Second. After a breath he added, "Chocolate cake would be good."

"As an alias?"

Sir James sighed. "To eat. These American trains are rough. And unsanitary. I've no appetite. But chocolate cake would be good."

He showed her a document. It listed names of other British scientists on the mission, alongside their inconspicuous "traveling names." Mary giggled, and even Sir James could not suppress a tightly-held grin.

"Tom Hicks? Billy Porter? Henry Farmer?" she teased. "Sir James, you can't be serious.

They do realize that 'Billy Porter' doesn't speak English?"

"It's absurd, I know. And call me Jack."

Mary laughed out loud. The G2 officer seated at the opposite corner, the only other person in the dining car, looked up and frowned.

"I'm sorry." She took a deep breath. "But that," she continued, "will not be possible."

"Only in Santa Fe."

"And what am I to be called, then?" she asked.

Sir James simply shrugged, ordered a slice of chocolate cake, and sank back into his portfolio until it arrived.

Mary removed a stubby and well-gnawed pencil from behind her ear. She was never without one. It was a habit learnt from Mr Merchant. The foreman of Solstowe Home taught her, among so many other practicalities as a child, to always carry a pencil and pad.

"Even to the bath?" she'd asked.

"Especially to the bath, dear girl. Did you know that ninety-per-cent of the greatest human ideas were conceived in bathtubs? It's the steam, you see. Gets the blood flowing through the brain in a particular way, you see."

It became a trademark, of sorts, the pencil behind the ear. Now, Mary was a child not blessed with ears that laid back prettily, or suited to the task of bearing pencils. So Mary practiced. She could, by the time she started public-school, carry as many as four, drawing them as an archer draws an arrow.

Mary had also developed an early obsession with baths. Each night she soaked in water so hot her backside glowed pink. She shared a bathroom with four brothers who paraded in and out without evidence of thought of discretion, casually chatting and using the toilet beside her.

"Charlie scored a goal today."

Shortly after Mary's tenth birthday, Mary's mother had Mr Merchant install a lock on the children's upstairs bathroom door. In-person interruptions gave way to nightly barrages of door banging. Her little brother Archibald, now two years out of nappies was hopelessly confused as to Mary's sudden need to conceal herself behind locked doors at bath time.

"Go away!" she shouted through the door.

"But it's cold. Let me in!"

In such a scalding bath, with such a pencil, the notion of Re-Arrangements of Matter In Low Energy Magnetic Fields first popped into her head. The thesis earned Mary, at sixteen, the International Minot Student Prize. In her speech Mary thanked Mr Merchant for instructing her in the value of pencils and baths. And now, in January of 1944, she shared dessert with Sir James Chadwick. Nobel Prize Winner. Discoverer of the Neutron. Discussing the need for code names as they approached their top-secret mission.

Monikers? Mary wrote names on her tablet and struck through them in turn. Martha Smith. Jane Smiley. Betty Jones. Lucy Merchant. Mary Minot. Mary Welty. Mary Go-Round. Mary Chadwick. Chocolate Cake. Helga Von-Rammsteiner. She smiled, then struck through that name as well.

Two days later, Mary and Sir James were met at Lamy Station by the General and his driver, and shared a jarring car ride over a narrow, pitted highway in a the coldest hour of dawn. Mary sat in front. The driver was a WAC, whose teeth visibly clenched, whose jaw flexed and whose knuckles were as white as the ghostly wisps of snow that followed alongside the car all the way to Santa Fe.

Sir James assumed a cool, relaxed posture, angled comfortably into a corner of the back bench. The General sat forward, almost off the seat, expressing himself with large, general's hands, clinching and unflinching, pointing and counting off, and then clinching once more. They conversed in the coded language of the Manhattan Project.

"T is showing some signs of wear, but Y3 is confident we will have it serviced in time for the L7."

"We're looking at a CWA as well, then?"

"Well, obviously."

Mary had arrived in America three years prior, when the code name for the nuclear weapons project was still "Tube Alloys," a near-meaningless slapping-together of words that sounded sufficiently scientific to give cover to her delegation during travel. In Washington she had seen Louis again, for the first time since '28. When the coast was clear they had met for cocktails in the lobby of the Hamilton Hotel on 14th. The following morning the sun broke

through the muslin curtains of Louis' room. Mary awoke. Louis lay beside her, knee propped up. He stared at the ceiling, smoking.

"But very soon," he began, continuing a line of thought that had begun the night before, but had been interrupted when Mary took his hand by the elevator. "Very soon, the Americans are going to stop listening, and start demanding."

Mary rolled over, taking Louis' cigarette. "I don't care about the politics. I just want to work."

Louis was right and now the Americans held the lead role, and the project had a fresh,

American-style code name — The Manhattan Project. This became its own problem. The name

itself was so irresistibly intriguing, it needed aliases of its own. The Gadget, for one.

And Mary's new home for the next couple of years had code names. The Hill. Site Y.

When she telephoned Dr Cockroft and gave her new official residence, it was Post Office Box

1663, Santa Fe, NM. Cockroft had laughed a silky laugh and said, "It must be an enormous box.

Everyone I know lives there."

The WAC brought the General's car to a stop on a side street perpendicular the Plaza. The General, Sir James and Mary ate a mostly silent lunch of green-chile stew with hominy and cornbread, washed down with lukewarm glasses of what the waitress assured Sir James was, in fact, tea. Afterward, Sir James showed Mary to the Administration Office where a certain Mrs McKibbon presented Mary her New Mexico state driving license. Accordingly, she would be, "Driver 88." She was likewise given a single sheet of green paper detailing her cover story.

"Excuse me, Mrs McKibbon," she said.

Mrs McKibbon turned and smiled. She wore dark rimmed glasses, a gold cardigan sweater and no makeup. Mary later said of Mrs McKibbon in a heavily censored letter to Cockroft:

Her disguise was clever. She was clearly, underneath it, a real beauty. I suppose it must be a laugh at first, teasing out one's hair, cigarette hanging out of the corner of one's mouth whilst banging out notecards on a typewriter. I imagine at the end of the day, Mrs McKibbon goes home, does up her hair, slips into a tight black dress, dons high-heeled pumps and red lipstick, and sits by the wireless eating ice cream.

"Yes dear?" Mrs McKibbon replied.

"Is it possible to change my cover story?"

The woman chuckled. "Don't I wish!" She leaned forward and placed a matronly hand on Mary's shoulder, looked side to side and whispered. "Say you meet some nice fella at the bar. He asks what you do, you say, 'secretary.' Take it from me, honey, no man will press you for any more details."

Mary smiled.

"Oh one more thing."

Mary turned.

"Don't talk to nice fellas at bars. Church, honey. That's where the good ones are." She winked and turned back to her typewriter.

Sir James was waiting outside.

"All set then, Miss-?"

Mary sighed. "Cavendish. Apparently."

"Miss Cavendish. Very good."

"They've given me an alias that actually makes me sound more British."