

Prologue

March 28, 1989

Flashing red lights on the control panels and the annoying intermittent deafening blast of the buzzing alarms startled the technicians in Rancho Seco's control room. Trained eyes zeroed in on the numerous gauges and banks of indicator lights. A supervisor burst out of his glassed-in office and yelled, "OK people! What do we have?"

Confusion broke loose as numerous responses overwhelmed the bewildered supervisor. He raised both arms up with palms out and shouted, "One at a time! Sam, you go first."

A short, slim balding man in glasses yelled back, "John, we've got a big problem! If these readings are correct, the main feed water pump for the reactor coolant system has shut down." Before he could continue, the room vibrated forcibly knocking coffee cups to the floor. More red lights on the many indicator panels started flashing.

"I've got an overload on turbine one! We've got automatic turbine shutdown taking place," a technician reported.

The significance of this event triggered John's analytical mind as he asked one of the female technicians standing in front of a wall of gauges, "Cindy, what's the primary system pressure looking like?"

"It's rising, but the indicator light for the pilot-operated relief valve is green." She replied. "It should be correcting itself, but I am still getting a reading for rising pressure."

He turned to yet another technician and asked, "How's the core temperature holding?"

“It’s approaching critical,” he answered.

Another voice interrupted. “I’ve got high radioactive reading for vented gases!”

John had enough information to know that a meltdown was imminent, but he was puzzled by why the automatic SCRAM (Safety Control Rod Axe Man) had not initiated the shutting down of the nuclear reactor. Therefore, he gave the order, “That’s it, let’s shut her down!”

With that order, technicians immediately went into an automatic mode themselves. This wasn’t the first time they had gone through this scenario. Each knew their role as they toggled switches into position. A manual SCRAM had to be initiated so that the control rods could be lowered into position starting the shut-down of the nuclear fission process.

Rancho Seco was once again off-line.