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Pokhran-II and How We Hoodwinked the Western Intelligence

May is the cruelest month in the Thar desert of Rajasthan and Pokhran is no exception. In the summer of 1998, Pokhran was host to some unusual and very high profile guests.

Two of our renowned scientists, Dr Rajagopal Chidambaram, Chairman of the Atomic Energy Commission and Dr A P J Abdul Kalam, an aerospace engineer who then headed the Defence Research Development Organisation (DRDO), spent several nights along with a team of nuclear scientists and engineers sleeping in the open.

This was an attempt to see the movement and schedule of the American spy satellites so that the drilling for a deep tunnel could be taken up when the satellite looked the other way. They were dressed in army fatigues to disguise themselves from the prying villagers about the earth-shattering plans of their impending work.

India's Entry into the Big 5

They and the rest of the team were temporarily positioned in Pokhran as personnel of the 58th Regiment of the Army's Corps of Engineers, dressed in their ill-fitting uniforms and freshly issued false Identity cards; Dr Abdul Kalam had taken the name of Maj Gen Prithviraj. It was quaintly appropriate for him as he was the team leader of Prithvi missile project – India's first nuclear-capable ballistic missile with a range of 150 to 250 kms. He was indeed a 'Prithvi Raj'.

On 11 May, 1998, Operation Shakti (Pokhran-II) was initiated with the detonation of one fusion and two fission bombs. On 13 May, 1998, two additional fission devices were detonated, and Prime Minister Atal Bihari Vajpayee shortly convened a press conference to declare India a 'full-fledged nuclear state' to a stunned world.

India had barged into the exclusive club of the 'Big-5' nations; the declared nuclear weapon states under the Nuclear Non-Proliferation Treaty (NPT) who were also the 5 permanent members of the UN Security Council. They were not only in a position of authority but also had the power of the bomb. They had set the rules of the game all along and now the game had changed irrevocably.

This was the second time India was knocking down the world order. The first test, code-named 'Smiling Buddha' was conducted in May 1974.

Prof Raja Ramanna who was the team leader called Prime Minister Indira Gandhi on her office landline, and conveyed the pre-arranged code word 'The Buddha is smiling' to inform that the test was successful. India was a different country then, and the world was much more hostile to us. Not to enrage the superpowers, India soon termed it a 'peaceful nuclear implosion' for fear of attracting sanctions. Nevertheless, sanctions came quick and harsh. We had then hidden and suppressed our intentions. Now, in 1998 it was necessary to hide our actions, though the intention was clear.

Preparations for Pokhran -II

The Indian intelligence were aware of US spy satellites, and the interest of the CIA in trying to detect our nuclear test preparations since 1995. Therefore, the tests required complete secrecy and also needed to avoid detection by other countries, including our western neighbour who was waiting to carry out its own nuclear tests.

The 58th Regiment of the Army Corps of Engineers was commissioned to prepare the test sites. Its Commander Colonel Gopal Kaushik supervised the test preparations and ordered his "staff officers take all measures to ensure total secrecy." None of his staff were told of the identity of our scientists and engineers who started camping regularly at Pokhran.

Extensive planning was done by a very small group of scientists, senior military officers and senior politicians to ensure that the test preparations would remain totally under wraps. Even senior members of the

government had no clue of the planned activities. The scientists and engineers of the BARC and the DRDO were involved in the nuclear weapons assembly, layout, detonation and obtaining test data. A very small group of senior scientists were involved in the detonation process. Work was mostly done during the night, and equipment was returned to the original place to give the impression that it was never moved. Bomb shafts were dug under camouflage netting and the dugout sand was shaped like dunes, a natural sand formation in the Thar. Cables for sensors were covered with sand and concealed using native vegetation. Scientists would not depart for Pokhran in groups of two or three. They travelled to destinations other than Pokhran under pseudonyms, and were then transported by the army.

Three laboratories of the DRDO were involved in designing, testing and producing components for the bombs, including the advanced detonators, the implosion and high-voltage trigger systems. These were also responsible for weaponising, systems engineering, aerodynamics, safety interlocks and flight trials.

The bombs were transported in four trucks of the Army under the command of Colonel Umang Kapur; all devices from BARC were relocated at 03:00 hrs on 1 May 1998. From the Chhatrapati Shivaji International Airport, the bombs were flown in an AN-32 plane to the Jaisalmer army base. They were then transported to Pokhran in an army convoy of four trucks in three trips. The devices were delivered to the device preparation building, which was designated as 'Prayer Hall'.

Nuclear Devices and Detonations

The test sites were organised into two underground groups and were fired separately, with all devices in a group fired at the same time. The first group consisted of the thermonuclear device (Shakti I), the fission device (Shakti II), and a sub-kiloton device (Shakti III). The second group consisted of the remaining two sub-kiloton devices Shakti IV and V. It was decided that the first group would be tested on 11 May and the second group on 13 May. The timing of the tests depended on the local weather conditions, with the wind being the critical factor. By early afternoon, the winds had died down and the test sequence was initiated.

- At 3:43 pm on 11 May, three nuclear devices (specifically, Shakti I, II and III) were detonated simultaneously, as measured by international seismic monitors.

- On 13 May, at 12.21 pm, two sub-kiloton devices (Shakti IV and V) were detonated. Due to their very low yield, these explosions were not detected by any seismic station.

Why did we take so much precaution and extra care to hide our plans and activities? Because we had learnt our bitter lesson in 1974, when Indira Gandhi had asked then Chairman IAEC Dr Homi Sethna, and the team leader of the nuclear weapons program Dr Raja Ramanna to conduct the first nuclear tests, code-named 'Smiling Buddha'. The world reacted with open hostility in ganging up against us by creating the Nuclear Suppliers Group, which is still keeping India out of this exclusive club.

<https://www.thequint.com/voices/opinion/opinion-pokhran-two-nuclear-testing-india-apj-abdul-kalam-atal-bihar-vajpayee>

TIMES OF INDIA

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L&T, BrahMos unveil naval launcher

Larsen & Toubro (L&T) and BrahMos Aerospace have unveiled a new quadlauncher prototype, heralding another attempt to boost the performance of naval warships. The new prototype provides superior firepower compared to the twin canister and has the capability to launch four missiles in a single or salvo (simultaneous) mode. Besides, the quad launcher is suitable for warships which have space constraints to accommodate a vertical launch module.

The quad launcher, which was unveiled after conducting rigorous trials, will hit production once the Navy confirms an order. In that case, the quad launcher will be ready for deployment on naval ships within 18 months, said Jayant Patil, head of L&T's defence business. The quad launcher will be manufactured at L&T's Pune facility. The \$17-billion engineering and construction giant has been associated with BrahMos, a joint venture between Defence Research and Development Organisation (DRDO) and NPO Mashinostroyeniya of Russia.

for the development of naval missile programme since 2000.L&T has been upping its stake on the country's defence market after the government announced plans to cut down dependence on foreign military arms that has made India the world's top importer in the sector. Currently, defence accounts for nearly 4% of L&T's revenues.

<https://timesofindia.indiatimes.com/business/india-business/lt-brahmos-unveil-naval-launcher/articleshow/64086805.cms>

