



KUDANKULAM NUCLEAR POWER PLANT ISSUE

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ARTICLE INFO

Article History:

Received 15th April, 2017

Received in revised form 26th May, 2017

Accepted 20th June, 2017

Published online 28th July, 2017

Key words:

Nuclear power plant - violation of safety of norms
- Oppositions - Alarming Report - Supreme Court
Judgement.

ABSTRACT

In this paper it is described briefly about the sequence of the events involved in the formation of the Kudankulam Nuclear Power Plant and the reasons for opposition and the various consequences of the Nuclear Power Plant. In this paper the judgement of the Supreme Court is discussed in detail. India must implement strict international safeguards in handling nuclear technology and materials and must develop an environment friendly power programme based on renewable resources. India has enough potential in solar and wind energy. In the nuclear power plant two major issues appeared to have caused great concern among the people and apart from the issues like radiation and risks.

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INTRODUCTION

India has developed an installed capacity of 5,340 MW from wind power just over the last decade compared to 3580 MW from nuclear power developed over the last five decades. Nuclear power is expensive and dangerous. Its raw material is in short supply, as a result of which India is forced to sign a deal with US, and scientists have no idea how to dispose off its radioactive waste. Wind power is dependent on naturally flowing wind which is abundant supply available for free and doesn't generate any regular waste. That is probably why the Kudankulam Nuclear Power Plant has installed eight wind mills inside its premises.

The deal, which does not have approval of the Indian Parliament is not in the interest of people of this Country and must be rejected. India must implement strict international safeguards in handling nuclear technology and materials and must develop an environment friendly power programme based on renewable resources. India has enough potential in solar and wind energy.

In a public hearing conducted by the people, after the authorities had postponed their public hearing thrice, in Tuticorin on March 30, 2007, there was an informed unanimity in opposition to the Nuclear Power Plant. The speakers consisted of ordinary fisherfolk, priests, intellectuals, doctors, and scientists.

Dr. Kuglandi from Kalpakkam informed that based on random sampling it was found that 2-4 cancer deaths in a population of one lak year is normal. However, in Kalpakkam

this ratio is 3 in a population of 25,000. The tourists who come to Mamallapuram avoid eating the fish here, which strangely enough does not attract flies like it does elsewhere.

Kudankulam Nuclear Power Plant is a Nuclear Power Station currently under construction in Kudankulam in the Tirunelveli district of the Southern Indian State of Tamil Nadu. Project investment cost to India was estimated to be US\$ 3.5 billion in a 2001 agreement.

Objectives

1. To study under which title and section the Kudankulam Nuclear Plant Problem is filed in the Supreme Court.
2. To analyse the Kudankulam Nuclear Power Plant and also suggest some measures in such a way that it does not affect the people and environment.

Chapter - 1

History, Reasons for Opposition History

In 1988, during Rajiv Gandhi period a MOU (Memorandum of Understanding) for construction of nuclear power plant in India was signed between two countries India and Soviet (Russia). But due to several factors from political and economic crisis the project has been put on hold since there was a breakup in Soviet and moreover with the objection from US stating that the agreement signed didn't meet up with the current terms and conditions from the group of nuclear suppliers.

Previously before the 2004, the water reactor equipment was brought through roads as their mode of transport from Tuticorin port and due to various difficulties of damages incurred during its transportation it decided to select a Naval

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point base and come up with an idea to develop a small port near the tip of the country and they felt the best place would be Kudankulam in Southern Part of Tamil Nadu and then a small port become operational on January on 14, 2004 and the main purpose of its construction is to receive baggage's carrying oversized light water reactor from ships anchored at a few distance of half a km from its port.¹

In 2007 at MOU was signed India and Russia president Vladimir Putin visited India he had discussion with Manmohan Singh and both countries have planned to promote the use of nuclear energy to certain heights.

Run through of Kudankulam Nuclear Power Plant in Tamil Nadu

1998- MOU signed between India and Soviet for construction of Nuclear Power Plant in India.

1990- First phase of protest was held for opposing the diversion of water from Pechiparai Dam.

1998- Till 1998 the project agreement was put on hold due to breakup with Soviet.

2000- Construction of Kudankulam Nuclear Power Plant started before 2004- road has used as the mode of Transport for Reactors to be used in power plant.

2004- Small Port was been constructed for transportation and become operational in Kudankulam.

2007- MOU was signed between India and Russia to promote the Nuclear Power Plant in India.

2008- The Kudankulam Nuclear Power Plant team decided to go for additional four reactors at the atomic station. Though the capacity of these reactors has not been declared, it was expected that the capacity of each reactor will be 1200 MW or 1.2 GW. The new reactors would bring the total capacity of the power plant to 6800 MW or 6.8 GW.

2009- The first schedule project will begin in December 2009.

2010- Hydraulic Test was carried out at power units and second schedule will be on March.

2011- First schedule of operation begins in June. In the middle of March 2011 India has started the main stage of equipment tests at first nuclear power unit of Kudankulam under construction. The commissioned of Nuclear project will be on April 2011 several protest public towards Kudankulam Nuclear Power Plant.²

Thousands from the vicinity of the plant protested against it, fearing a nuclear disaster. According to the protestors evacuation of people in the event of a nuclear disaster would be impossible.

A Public Interest Litigation was filed with the Supreme Court asking for nuclear power development to be delayed until safety concerns were independently assessed.

2012- Second Schedule operation will begin on March.

In March, nearly 200 anti-nuclear protestors were detained for a few hours by the police. The Protestors were to join the protests objecting resumption of work.

2013- In May, the Supreme Court ruled in favour of the plant, stating that the nuclear power plant was in the larger public interest.

Reasons For Opposing: The people of Kudankulam have been opposing the Kudankulam Nuclear Power Project (KKNPP) ever since it was conceived in the mid-1980s. The people of Kudankulam village themselves were misled by false promises such as 10,000 jobs, water from Pechiparai dam in Kanyakumari district, and fantastic development of the region. We tried in vain to tell them that they were being deceived. Without any local support, we could not sustain the anti-Kudankulam movement for too long.

Now the people of Kudankulam know and understand that this is not just a fisher folk's problem, they may be displaced, and they have to deal with radioactive poison. Their joining the movement in 2007 has invigorated the campaign now.³ And (almost) all of us here in the southernmost tip of India oppose the Kudankulam NPP for a few specific reasons:

1. The KKNPP reactors are being set up without sharing the Environmental Impact Assessment (EIA), Site Evaluation Study and Safety Analysis Report with the people, or the people's representatives or the press. No public hearing has been conducted for the first two reactors either. There is absolutely no democratic decision-making in or public approval for this project.
2. The Tamil Nadu Government G.O. 828 (29.4.1991-Public Works Department) establishes clearly that "area between 2 to 5 km radius around the plant site, [would be] called the sterilization zone." This means that people in this area could be displaced. But the KKNPP authorities promise orally and on a purely adhoc basis that nobody from the neighbouring villages would be displaced. This kind of adhocism and doublespeak causes suspicion and fears of displacement.⁴
3. More than 1 million people live within the 30 km radius of the KKNPP which far exceeds the AERB (Atomic Energy Regulatory Board) stipulations. It is quite impossible to evacuate this many people quickly and efficiently in case of a nuclear disaster at Kudankulam.
4. The coolant water and low-grade waste from the KKNPP are going to be dumped in to the sea which will have a severe impact on fish production and catch. This will undermine the fishing industry, push the fisher folks into deeper poverty and misery and affect the food security of the entire southern Tamil Nadu and southern Kerala.
5. Even when the KKNPP projects function normally without any incidents and accidents, they would be emitting Iodine 131, 132, 133, Cesium 134, 136, 137 isotopes, strontium, tritium, tellurium and other such radioactive particles into our air, land, crops, cattle, sea, seafood and ground water. Already the southern coastal belt is sinking with very high incidence of cancer, mental retardation, down syndrome, defective births due to private and government sea-sand mining

¹ Nuclear Power Plant Information, International Atomic Energy Agency, URL accessed 12 June 2006, 24.06.2015, 10.00am

² <http://www.nuclearfriendsfoundation.com/pdf/FactsonKudankulamNuclearPowerProject.pdf>, 24.06.2015, 10.10am

³ <http://www.dianuke.org/thirteen-reasons-against-the-Koodankulam-nuclear-Power-project/>, 24.06.2015, 10.15am.

⁴ *ibid*

- for rare minerals including thorium. The KKNPP will add many more woes to our already suffering people.⁵
6. The quality of construction and the pipe work and the overall integrity of the KKNPP structures have been called into question by the very workers and contractors who work there in Kudankulam. There have been international concerns about the design, structure and workings of the untested Russian-made VVER-1000 reactors.
 7. The then Minister of State in the Ministry of Environment and Forest Mr. Jairam Ramesh announced a few months ago that the central government had decided not to give permission to KKNPP 3-6 as they were violating the Coastal Regulation Zone stipulations. It is pertinent to ask if KKNPP 1 and 2 are not violating the CRZ terms.
 8. Many political leaders and bureaucrats try to reassure us that there would be no natural disasters in the Kudankulam area. How can they know? How can anyone ever know? The 2004 December tsunami did flood the KKNPP installations. There was a mild tremor in the surrounding villages of Kudankulam on March 19, 2006. On August 12, 2011, there were tremors in 7 districts of Tamil Nadu.⁶
 9. Indian Prime Minister himself has spoken about terrorist threats to India's nuclear power plants. Most recently, on August 17, 2001, Minister of State for Home, Mr. Mullappally Ramachandran said: "the atomic establishments continue to remain prime targets of the terrorist groups and outfits."⁷
 10. The important issue of liability for the Russian plants has not been settled yet. Defying the Indian nuclear liability law, Russia insists that the Inter-Governmental Agreement (IGA), secretly signed in 2008 by the Indian and Russian governments, precedes the liability law and that Article 13 of the IGA clearly establishes that NPCIL is solely responsible for all claims of damages.
 11. In 1988 the authorities said that the cost estimate of the Koodakulam 1 and 2 projects was Rs. 6,000 crores. In November 1998, they said the project cost would be Rs. 15,500. In 2001, the ministerial group for economic affairs announced that the project cost would be Rs. 13,171 crores and the Indian government would invest Rs. 6,775 crores with the remainder amount coming in as Russian loan with 4 percent interest. The fuel cost was estimated to be Rs. 2,129 crores which would be entirely Russian loan. No one knows the 2011 figures of any of these expenses. No one cares to tell the Indian public either.
 12. The March 11, 2011 disaster in Fukushima has made it all too clear to the whole world that nuclear power plants are prone to natural disasters and no one can really predict their occurrence. When we cannot effectively deal with a nuclear disaster, it is only prudent to prevent it from occurring. Even the most industrialized and highly advanced country such as Germany has decided to phase out their nuclear power a plant by the year 2022. Switzerland has decided to shun nuclear power technology. In a recent

referendum, some 90 percent of Italians have voted against nuclear power in their country. Many Japanese prefectures and their governors are closing nuclear power plants in their regions. Both the United States and Russia have not built a new reactor in their countries for 2-3 decades ever since major accidents occurred at Three Mile Island and Chernobyl.⁸

In our own country, Mamta Banerjee government in West Bengal has stopped the Russian nuclear power park project at Haripur in Purba Medhinipur district and taken a position that they do not want any nuclear power project in their state. Similarly, the people of Kerala have decided not to host any nuclear power project in their state.

13. And finally, the Indian government's mindless insistence on nuclear power, utmost secrecy in all of its nuclear agreements and activities, and its sheer unwillingness to listen to the people's concerns and fears make us very doubtful about the real benefactors of all this nuclear hoopla.

Chapter – 2

Supreme Court Judgement on Kodankulam

The Supreme Court of India has not yet granted permission for commissioning the Kodankulam nuclear power plant in Tamil Nadu, as its judgment on 6 May 2013 makes obvious. But unfortunately it does not seem to have paid serious attention to concerns raised by the former chairperson of the Atomic Energy Regulatory Board, among others, on the quality of components provided by the Russian supplier. It also does not appear to have had the opportunity to ponder over the findings of the Fukushima Nuclear Accident Independent Investigation Commission, which was forthright in its view that the Fukushima disaster was man-made.

Contrary to most media reports, the Supreme Court (SC) has not yet formally granted permission for commissioning the Kodankulam nuclear power plant (KKNPP) in Tamil Nadu (see its judgment dated 6 May 2013 in Special Leave Petition –Civil (SLP-C) No 27335 of 2012).

The SC has clearly stipulated in para 1 of its directions, "The plant should not be made operational unless Atomic Energy Regulatory Board (AERB), Nuclear Power Corporation of India Ltd (NPCIL), Department of Atomic Energy (DAE) accord final clearance for commissioning of the plant ensuring the quality of various components and systems because their reliability is of vital importance."

In para 15, it has added, "The AERB, NPCIL, Ministry of Environment and Forests (MoEF) and Tamil Nadu Pollution Control Board (TNPCB) would oversee each and every aspect of the matter, including the safety of the plant, impact on environment, quality of various components and systems in the plant before commissioning of the plant. A report to that effect be filed before this Court before commissioning of the plant."⁹

It may, however, be noted that although the two-judge bench of the SC unanimously pronounced on the *rationes decidendi* (the operative part and directions) of the judgment,

⁵ <http://npcil.nic.in/main/AboutUs.aspx>, 24.06.2015, 10.20am.

⁶ *ibid*

⁷ *ibid*

⁸ <http://www.thehindu.com/news/states/tamil-nadu/article2580176>, 24.06.2015, 10.30am.

⁹ <http://judis.nic.in/supremecourt/chejudis.asp>, p 242, 18/06/2015, 3.35pm

the opinions expressed by them - justices K S Radhakrishnan and Dipak Misra - on some of the critical aspects related to the subject are vastly different. On 23 April 2013, through an application seeking interim directions, Prashant Bhushan and Sanjay Parikh, counsel for the petitioner, had submitted before the apex court that A Gopalakrishnan, former chairperson of the AERB, had raised serious concerns about the quality of components that the Russian supplier had provided to the KKNPP. Gopalakrishnan's apprehensions were expressed in an article that was published in the *New Indian Express* on 19 April 2013.¹⁰

Alarming Report

An alarming report published online on 28 February 2012 by the Bellona Foundation, an international environmental non-governmental organisation (NGO) based in Norway, stated that the Russian Federal Security Service (FSB) had arrested Sergei Shutov, the procurement director of Zio-Podolsk, on charges of corruption and fraud. The FSB charged Shutov with buying cheap, low-quality raw materials over the years, passing them off as high-quality materials, and pocketing the difference. Thus, according to Gopala-krishnan, "The problems with Zio-Podolsk supplies to the KKNP-1 project, seen in the context of the widespread allegations of corruption and poor quality, indicate that the root cause of KKNP-1 problems lies in those substandard supplies".¹¹

The charge of poor-quality supplies to unit 1 from the Russian supplier was not a wild allegation. The AERB found at least four defective valves during the second round of inspections at unit 1, the results of which were revealed on 19 April 2013.¹² (Incidentally, the defective valves were detected only after activists in Kodankulam, who found out about the Shutov scam in Russia, raised a furor.)¹³ The claim that the Russian supplier has supplied only four defective valves to the KKNPP is a little difficult to digest.

Under the circumstances, KKNP Unit-1 commissioning and KKNP-2 construction work must be stopped forthwith, and there can be no question of resuming these works towards start-up of both these reactors until a thorough and impartial investigation is carried out into the impact of this corruption scandal and sub-standard supplies on the safety of these reactors. And these investigations must be carried out by a team, where majority membership must not be from DAE, NPCIL and AERB, but include subject experts from other organisations in the country. India must also seriously consider inviting an IAEA [International Atomic Energy Agency] expert team specially constituted to investigate the specific issues which this scandal has thrown up.¹⁴

According to him, the problem, to put it simply, appears to be the inability to eliminate spurious signals of untraced origin appearing in many of the instrumentation cables of paramount importance to safety, like the reactor neutron chamber output

lines, wiring of the safety and shut-off rod control systems, etc. Such phenomena belong to a broad class of problems known as Electro-Magnetic Interference (EMI). ... It is most likely that the KKNPP cable system, as completed today, has not conformed to the norms and standards of cable selection, EMI shielding, or layout as per Russian, Indian or any other standards. No wonder the EMI problem is persisting, because there is no other short-cut solution other than re-doing a sizeable part of the I&C cabling and its layout in accordance with a set of modern standards, agreeable also to the Russians. This may take several more months and extensive re-working, but this must be done in the interest of public safety.¹⁵

In this context, it may be noted that justice Radhakrishnan, in para 24 of the judgment, has observed, "Safety and security of the people and the nation are of paramount importance when a nuclear plant is being set up and it is vital to have in place all safety standards in which public can have full confidence to safeguard them against risks which they fear and to avoid serious long term or irreversible environmental consequences."

Violation of Safety Norms

While the judgment has explicitly stated that "safety and security of the people and the nation are of paramount importance", it failed to take note of the concerns expressed by Gopalakrishnan with the importance that they deserved. Nothing prevented the judges from giving specific directions to the AERB and the NPCIL to allay the apprehensions expressed by Gopalakrishnan, who has the scientific and technical expertise to raise questions on the quality of the components installed at units 1 and 2. Although the operative part of the judgment has placed ample emphasis on the need for ensuring the quality of components installed at units 1 and 2, the inability to dwell on the actual failures in this regard in the explanatory part is a glaring omission. It is an undeniable fact that the NPCIL failed to detect the existence of the four faulty valves at the pre-installation stage and that the AERB also did not detect them during the first round of inspections that it carried out at unit 1. The AERB's permission to NPCIL to load fuel rods into the reactor core (from 20 September 2012 onwards when the four defective valves were still in place at unit (1) was a gross violation of safety precautions.¹⁶ On the premise that the Court is not competent to pronounce on the veracity of scientific and technical opinions, justice Radhakrishnan, in para 188 of the judgment, has stated, "The Court, in our view, cannot sit in judgment on the views expressed by the Technical and Scientific Bodies in setting up of KKNPP plant at Kodankulam and on its safety and security."

After the Fukushima disaster in Japan, the Government of India introduced the Nuclear Safety Regulatory Authority Bill in Parliament on 7 September 2011, which was to purportedly create an independent and transparent regulatory mechanism to oversee the safety and security of nuclear establishments in the country. While the various clauses of the present bill effectively stifle all hopes of creating an independent and transparent regulatory body that the government actually

¹⁰ <http://newindianexpress.com/opinion/Resolve-Kodankulam-issues/2013/04/19...>, 18/06/2015, 3.40pm

¹¹ <http://newindianexpress.com/opinion/Resolve-Kodankulam-issues/2013/04/19...>, 18/06/2015, 3.40pm

¹² <http://www.thehindu.com/news/national/tamil-nadu/2013/04/20,18/06/2015,3.45pm>

¹³ Letter to the NPCIL, dated 28 January 2013, filed by S P Udaykumar under the Right to Information Act, 2005.

¹⁴ <http://newindianexpress.com/opinion/Resolve-Kodankulam-issues/2013/04/19...>, 19/06/2015, 4.00pm.

¹⁵ <http://newindianexpress.com/opinion/Flaws-in-Kodankulam-plant/2013/06/19/article1641376.ece>, 19/06/2015, 4.05pm.

¹⁶ <http://www.thehindu.com/news/national/tamil-nadu/fuel-loading-begins-at-kudankulam-after-aerbs-green-signal/article3922714.ece> on 21 sep, 20/06/2015, 4.15pm

dabbled with the idea of creating one was a radical departure from its usually narrow views on this subject.¹⁷ Therefore, the Court has reneged from its duty of upholding the spirit of Article 21 of the Constitution (right to life and personal liberty) is a matter that requires to be examined in a little more detail.

Contradictory Views

Justice Radhakrishnan, on his part, has tried to turn the essence of Article 21 on its head. His opinion that the petitioner's complaint against violation of Article 21 "has no basis" since the alleged violation was actually an act in fulfilment of the object and purpose of Article 21 amounts precisely to that. Justice Radhakrishnan, indeed, has stated so in para 184 of the judgment.

Nuclear power plant is being established not to negate right to life but to protect the right to life guaranteed under Article 21 of the Constitution. The petitioner's contention that the establishment of nuclear power plant at Kudankulam will make an inroad into the right to life guaranteed under Article 21 of the Constitution ...therefore has no basis.

In para 178 of the judgment, he has expressed his opinion on the applicability of Article 21, "While setting up a project of this nature, we have to have an overall view of larger public interest rather than smaller violation of right to life guaranteed under Article 21 of the Constitution." None other than his colleague on the two-judge bench, justice Misra, found it hard to agree to such a farfetched interpretation of Article 21.

Para 228, To elaborate, unless adequate care, caution and monitoring at every stage is taken and there is constant vigil, life of "some" can be in danger. That will be totally shattering of the constitutional guarantee enshrined under Article 21 of the Constitution. It would be guillotining the human right, for when the candle of life gets extinguished, all rights of that person perish with it. Safety, security and life would constitute a pyramid within the sanctity of Article 21 and no jettisoning is permissible. Therefore, I am obliged to think that the delicate balance in other spheres may have some allowance but in the case of establishment of a nuclear plant, the safety measures would not tolerate any lapse. The grammar has to be totally different. ...¹⁸. All efforts are to be made to avoid any man-made disaster. Though the concept of delicate balance and the doctrine of proportionality of risk factor gets attracted, yet the same commands the highest degree of constant alertness, for it is disaster affecting the living. The life of some cannot be sacrificed for the purpose of the eventual larger good.

That there is wide difference of opinion between the two judges regarding the scope of Article 21 is very evident.

Undue Faith

Justice Radhakrishnan also appears to have reposed complete faith in the infallibility of the reports submitted by the various official agencies. In para 185 of the judgment, he has expressed his view on this very approvingly, AEC, DAE,

BARC, AERB, NPCIL, TNPCB the expert bodies, are all unanimous in their opinions that adequate safety and security measures have already [been] taken at KKNPP which are to be given due weight that they deserve. Further, as already indicated, NPCIL Task Force Report on Security of all NPPs including KKNPP dated March 2011, 11.5.2011, AERB-EE Expert Opinion on Design Committee Safety dated 31.8.2011, 15 Member Expert Team Committee Report (post Fukushima) dated December 2011, Supplementary Report dated 31.2.2012 on the Grievances raised by some of the agitators, report submitted by Sri R Srinivasan, Former President, Atomic Energy Commission appointed by the State of Tamil Nadu are all unanimous in their view on the safety and security of KKNPP.

According to Justice Radhakrishnan, "Apprehension, however, legitimate it may be, cannot override the justification of the project. ...But once the justification test is satisfied, the apprehension test is bound to fail".¹⁹This is a wholly untenable argument because, even if there is adequate justification for setting up a particular project, there could still be many legitimate apprehensions about its design, quality, execution, and operation especially whether they meet the required safety standards. Unfortunately, he appears to discount all such possibilities.

Lessons from Fukushima

It also appears that the SC did not have the opportunity to deliberate on the findings of the Fukushima Nuclear Accident Independent Investigation Commission (NAIIC), which the National Diet of Japan set up on 8 December 2011 in response to the Fukushima disaster of 11 March 2011. The NAIIC report, which was released on 12 September 2012, is explicit and forthright in expressing the view that the Fukushima disaster was a "manmade disaster".

Only by grasping this mindset can one understand how Japan's nuclear industry managed to avoid absorbing the critical lessons learned from Three Mile Island and Chernobyl; and how it became accepted practice to resist regulatory pressure and cover up small-scale accidents. It was this mindset that led to the disaster at the Fukushima Daiichi Nuclear Plant.²⁰

The conclusions of the NAIIC report are equally damning. It unequivocally states,

1. The Tokyo Electric Power Company (TEPCO) Fukushima Nuclear Power Plant accident was the result of collusion between the government, the regulators and TEPCO, and the lack of governance by said parties. They effectively betrayed the nation's right to be safe from nuclear accidents. Therefore, we conclude that the accident was clearly "manmade".
2. There were many opportunities for taking preventive measures prior to March 11 [2011]. The accident occurred because TEPCO did not take these measures, and NISA [Nuclear and Industrial Safety Agency] and the Nuclear Safety Commission (NSC) went along. They either intentionally postponed putting safety measures in place, or made decisions

¹⁷ <http://www.thehindu.com/opinion/op-ed/a-nuclear-regulator-without-teeth/...> 08/09/2012, 20/06/2015, 4.15pm.

¹⁸ <http://www.thehindu.com/opinion/op-ed/a-nuclear-regulator-without-teeth/...> , 20/06/2015, 4.20pm.

¹⁹ <http://judis.nic.in/supremecourt/chejudis.asp>, 20/06/2015, 4.25pm.

²⁰ <http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naaic.go.jp/en/report/>, 20/06/2015, 4.30pm.

based on their organisation's self interest, and not in the interest of public safety.²¹

3. The regulators should have taken a strong position on behalf of the public, but failed to do so. As they had firmly committed themselves to the idea that nuclear power plants were safe, they were reluctant to actively create new regulations. Further exacerbating the problem was the fact that NISA was created as part of the Ministry of Economy, Trade and Industry (METI), an organisation that has been actively promoting nuclear power.
4. The regulators did not monitor or supervise nuclear safety. ...Their independence from the political arena, the ministries promoting nuclear energy, and the operators was a mockery. They were incapable, and lacked the expertise and the commitment to assure the safety of nuclear power. Moreover, the organisation lacked transparency. Without the investigation by this Commission, operating independently of the government, many of the facts revealing the collusion between the regulators and other players might never have been revealed.²²

Chapter – 3

Latest news about the Kudankulam Nuclear Power Plant Problem

Kudankulam first reactor shut down for maintenance

Chennai | Press Trust of India | Thursday June 25, 2015

The first reactor of Kudankulam Nuclear Power Plant which has generated 6,873 million units till Wednesday morning, was shut down around 11:30a.m. for mandatory annual maintenance and refuelling outage.

Kudankulam Nuclear Plant Reactor Trips, Stops Generation

Tamil Nadu News | Indo-Asian News Service | Sunday May 10, 2015

The first 1,000-MW unit of Kudankulam Nuclear Power Project (KNPP) stopped generation on Saturday evening after the reactor tripped, the Power System Operation Corporation Ltd. (PSOCO) said today.

According to PSOCO, the Kudankulam Nuclear Power Plant's first unit stopped at 6.38 pm on May 9 owing to "reactor trip due to transient in-steam generator level control." The unit touched the day's peak generation of 873 MW. India's atomic power plant operator Nuclear Power Corporation of India Ltd. (NPCIL) is setting up two 1,000-MW Russian reactors at Kudankulam in Tirunelveli district, 650 km from Chennai.

The first unit, which is the beginning of the fission process, attained criticality in July 2013. The second unit is expected to start commercial generation this fiscal.²³

Second Unit of Kudankulam Nuke Power Plant to be Operational Soon

Chennai News | Press Trust of India | Tuesday April 7, 2015

Work is underway for the second unit of Russia-assisted KNPP in Tamil Nadu and will be operational soon, a senior Russian Consulate official in Chennai said yesterday. "The second unit will be operational soon and work is on for that," Vice-Consul (Cultural), Consulate General of the Russian Federation, Mikhail Y Gorbатов said. As regards the proposed units three and four, preliminary work had begun, he said in brief remarks at a book release function. India and Russia were strategic partners and would continue to grow strong and be mutually beneficial, he said as he insisted that Moscow is not against any help and cooperation New Delhi is receiving from other countries. "We are not against India getting help and cooperation for the benefit of Indian economy from other countries," he said, without elaborating further. Praising the time-tested Indo-Russian ties, Secretary General of the Indo-Russian Chamber of Commerce and Industries, P Thangappan said: "Russian technology is always cost effective, safe and secure."²⁴

Kudankulam Nuclear Plant's Second Unit to Undergo Hot Run Test Tomorrow

Tamil Nadu News | Press Trust of India | Friday February 27, 2015

The second 1,000 MWe unit of the Kudankulam Nuclear Power Plant is likely to undergo hot run test from tomorrow during which steam would be released into atmosphere and noise level would go up, a top official today said, asking local public not to be. Noting that the test was likely to commence tomorrow, he said, "During the testing, the ambient noise level is likely to go up. It is informed that the tests will be conducted during day time only and there is no need for any concern to the public."

He also reiterated that no tests were conducted at the site which were harmful to the environment and public. Elaborating about the hot run, he said, "Steam flow path and steam relief devices will be tested. During these tests, only steam release (water vapour) to the atmosphere will take place for a period of 2-3 minutes." The hot run test for the unit I in 2011 created a scare among locals and the KNPP officials came in for flak for not giving advance information about the exercise. The first 1000 MWe unit at the Indo-Russian joint venture, which faced prolonged protests from anti-nuclear activists, commenced its commercial operations in December last year.²⁵

Kudankulam Nuclear Plant Restarts Power Generation

South | Indo-Asian News Service | Monday January 19, 2015
Power generation at the Kudankulam Nuclear Power Project (KNPP) has restarted after the first unit's reactor and turbine tripped on January 14, said Power System Operation Corporation Ltd. today. The atomic power unit touched a peak generation of 658 MW since it was restarted and the average generation for the day was 168 MW. India's atomic power plant operator Nuclear Power Corporation of India Ltd. is setting up two 1,000 MW Russian reactors at Kudankulam, 650 km from Chennai. The first unit attained criticality, which is the beginning of the fission process, July 2013. Subsequently it was connected to the southern grid in October 2013. According to G.Sundarrajan, an anti-nuclear power

²¹ Justice B.P Banerjee, *Public Interest Litigation*, Lexis Nexis, 2014, pp. 154-155.

²² <http://www.thehindu.com/todays-paper/tp-national/tp-newdelhi/sixty-scientists-plant-safety/article4719786.ece>, 20/06/2015, 4.30pm.

²³ <http://www.hindustantimes.com/india-news/bangalore/India-s-20th-nuclear-power-plant-goes-critical/Article1-631532.aspx>. Retrieved 2011-03-13, 25.06.2015, 10.45am.

²⁴ *ibid*

²⁵ *ibid*

activist and who had filed a case against the setting up of the Rs.17,000 crore KNPP, the atomic power company suffers at least Rs.8 crore loss per day of plant outage. "Ever since the first unit at KNPP started commercial generation December 31, 2014 it has been producing around 940 MW per day or around 2.25 crore units per day," Sundarrajan told IANS.

Kudankulam Nuclear Power Plant Generates 750 Megawatts

South | Press Trust of India | Tuesday December 9, 2014
Power generation at Kudankulam Nuclear Power plant's Unit-1, which was shut down about two months ago due to technical reasons, has resumed and it touched 750 megawatts today, a top official said.²⁶

Kudankulam Nuclear Plant Likely to Resume Power Generation in December

South | Press Trust of India | Wednesday November 26, 2014
The Kudankulam Nuclear Power Plant (KKNPP), whose unit 1 was shut down due to some issues in turbine functioning in September, is expected to resume power generation by the first week of December, the government today said.

Kudankulam Nuclear Plant to Start Commercial Operations by January 22

South | Press Trust of India | Sunday November 16, 2014
Commercial operations of the first 1,000 MW unit of Kudankulam nuclear power project is now expected to start by January 22 next year. An earlier deadline could not be met due to technical problems, said officials.²⁷

Unit 1 of Kudankulam Nuclear Plant Shut Down for 6 to 8 Weeks

South | Press Trust of India | Monday October 20, 2014
Kudankulam Nuclear Power plant's first unit was today shut down for six to eight weeks after a "minor" problem was detected in its turbine generator which had a run for over 190 days.

Unit 1 of Kudankulam Power Plant Shut Down for 6 to 8 Weeks

South | Indo-Asian News Service | Monday October 20, 2014
A major problem in the first atomic power unit's turbine at Kudankulam has put the unit out of action for around six-eight weeks, the NPCIL said on Monday.

Kudankulam Nuclear Plant Second Unit to Start Fission in November

South | Indo-Asian News Service | Sunday September 7, 2014
The second 1,000 MW unit at the Kudankulam Nuclear Power Project (KNPP) is expected to start fission process in November while the first unit is yet to restart power generation, according to the project operators.²⁸

Kudankulam Nuclear Plant to Restart Soon: Official

South | Indo-Asian News Service | Friday August 15, 2014
The Kudankulam Nuclear Power Project will once again start generating 1,000 MW power as all the mandatory tests have been completed, a senior official said on Friday.

Kudankulam Plant's Second Unit to be Commissioned Shortly: Government

South | Press Trust of India | Thursday July 24, 2014
Kudankulam nuclear power project's second 1,000 MW unit is expected to be commissioned shortly, the government said today.

CPI-M Lawmaker Opposes Kudankulam Nuclear Power Plant III, IV Units in Tamil Nadu Assembly

South | Tuesday July 22, 2014
Communist Party of India (Marxist) or CPI(M) legislator R Annadurai on Monday raised concerns in the Tamil Nadu Assembly over nuclear safety in the KNPP complex and opposed its expansion, citing the Fukushima disaster in Japan.²⁹

CPI-M Lawmaker Opposes Kudankulam Nuclear Power Plant III, IV Units in Tamil Nadu Assembly

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Nuclear Regulator Rules Out Deficiency in Valve Construction in Kudankulam

South | Press Trust of India | Monday June 16, 2014
Atomic Energy Regulatory Board (AERB) has ruled out any deficiency in the construction of a valve in Unit 1 of Kudankulam Nuclear Power Plant where six people were injured due to spillage of hot water during maintenance work last month.

India Seeks More Security Measures for Kudankulam Nuclear Plant

India News | Press Trust of India | Monday June 9, 2014
India has sought "enhanced security measures" for the Kudankulam Nuclear Power Plant after the Fukushima Daichi atomic disaster in Japan, Russia today said.

Kudankulam Nuclear Plant Attains Full Power Status For First Time

India News | Written by Pallava Bagla | Saturday June 7, 2014
India's largest nuclear plant reached its full power for the first time today afternoon.

Kudankulam Nuclear Plant Attains Full Power Status

India News | Press Trust of India | Saturday June 7, 2014
Kudankulam Nuclear Power Plant (KNPP) today attained its full generation capacity and became the first nuclear plant in the country to generate 1,000 MWe of power, its site Director R S Sundar said.

Six Injured in 'Hot Water Spillage' at Kudankulam Nuclear Plant, No Radiation Leak

South | Reported by Pallava Bagla | Thursday May 15, 2014
Six workers at the Kudankulam Nuclear Power Plant in Tamil Nadu sustained nearly 50 per cent burn injuries today due to spillage of hot water in the turbine building.

²⁶ <http://www.deccanchronicle.com/channels/nation/south/kudankulam-nuclear-row-sjege-continues-even-expert-dismisses-safety-fears-061>, 25.06.2015, 11.00am.

²⁷ Ibid.

²⁸ Ibid.

²⁹ Ibid.

Kudankulam nuclear plant commercial operation delayed again

South | Indo-Asian News Service | Friday April 11, 2014.
The commercial operation of the first 1,000 MW unit atomic power plant at Kudankulam again has jumped the target date by a month to May, the Nuclear Power Corporation of India Ltd. (NPCIL) has said.³⁰

SP Udayakumar, who led movement against Kudankulam nuclear plant, joins Aam Aadmi Party

Elections News | Edited by Nadim Asrar | Friday February 28, 2014

Activist SP Udayakumar, who spearheaded a people's movement against the Kudankulam nuclear power plant in Tamil Nadu, joined the Aam Aadmi Party today.

AAP invites anti-Kudankulam activists in Tamil Nadu to become members

Elections News | Indo-Asian News Service | Monday February 17, 2014

AAP was approached by people of Iddinthakarai - the epicentre of the protest against the Kudankulam Nuclear Power Project spearheaded by People's Movement Against Nuclear Energy (PMANE) - who expressed their wish to join the party.

CONCLUSION

Several protest by public and statement from central government and state political parties are being raised as an issue to find an opt solution. The government should be in a position to think about the situation of its people. There are several ways to generate power and the government should not build up these types of plants as it threatens the life of the people and creates disaster. Government should think about the people or else to depend on the electricity needed for the people.

In the context of the nuclear power plant two major issues appeared to have caused concern among the people, apart from issues like radiation and risks. One was the issue of drawing water from Pecheiparai reservoir for the nuclear plant. Farmers concerned over the issue of water supply for agricultural purposes supported movement because it threatened their livelihood, particularly in the context of water scarcity. The second one was the issue of discharge of high temperature waste water into the sea. The waste water would kill the fish near the shore leading and fishing communities feared the loss of their livelihood. Thus, for the people in and around Kudankulam the mainstream development process of the Indian state was destructive in nature. It is in this argument that the movement's notion of alternative development is anchored.

To conclude, by understanding the importance of public and its safety the current communication gap and relationship with the power plant team and public can be highly reduced. Moreover with several campaigns and programs conducted in the public, knowledge about power plant its importance and safety measures can be highly conveyed and educated to the people will let both public and government us to have an end towards the issue. The role the committee plays a vital role in producing a decisive report which would satisfy all the stakeholders involved in the Kudankulam Nuclear Power Plant. The Public can also realize the practicality of the project and its necessity for the state before blindly opposing it.

Reference

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How to cite this article:

Tharani S (2017) ' Kudankulam Nuclear Power Plant Issue', *International Journal of Current Advanced Research*, 06(07), pp. 4524-4531. DOI: <http://dx.doi.org/10.24327/ijcar.2017.4531.0530>

³⁰ Ibid.