

**Losses due to closure of second unit of
MAPS**

*342 SHRI RAM AWADESH SINGH.†
SHRI SATYA PRAKASH
MALAVIYA:

Will the PRIME MINISTER be pleased to refer to answer to Unstarred Question 395 given in the Rajya Sabha on the 6th November, 1986 and state what is the estimated amount of loss suffered by Government due to recent closure of Unit-II of the Madras Atomic Power Station (MAPS)?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K R NARAYANAN): Unit II of Madras Atomic Power Station was shut down on August 14, 1986 due to a stuck fuel bundle in the fuel transfer system outside the reactor proper. The Unit was brought back on line on November 7, 1986 and is presently operating at a power level of 110 MW. The shortfall in gross generation for Unit II during this period is estimated to be about 138 million Units and the resultant loss in revenue is about Rs 59 crores.

श्री राम अवधेश सिंह : महोदय मंत्री जी का जो जवाब है वह जो पिछले कई बार से रटा रटाया आ रहा है। अनस्टांड क्वेश्चन में भी पूछा गया उसमें करीब करीब इनका जवाब यही था। लेकिन हम जानना चाहते हैं मंत्री जी से कि घटना की जांच की गयी थी तो उस घटना की जांच में क्या क्या चीजें मिली? क्या इतना ही रिएक्टर वाला मामला है या डिजाइन में गड़बड़ी है या वहां के काम करने वाले लोगों के चलते या जो मैनेजमेंट के लोग हैं उनके चलते गड़बड़ी हुई है या जिन लोगों ने बनाया है, खराब मैटीरियल दे दिया है इस वजह से रिएक्टर में

†The question was actually asked on the floor of the House by Shri Ram Awadesh Singh.

“स्पेट ऑफ” फ्यूल फस गया। इनका यही जवाब बार-बार आता है लेकिन मैं चाहता हूँ कि ये कैटेगोरिकली जवाब दें।

SHRI K. R. NARAYANAN: Sir, the answer is exactly to the question asked.

MR CHAIRMAN No The question that he has put is whether there are any other factors which have disabled the reactor and, if so, what they are.

SHRI K R. NARAYANAN: Yes, Sir. They have gone into the question as to why this fuel bundle got stuck up. It was because of an instrument error, not of a major kind. But it was, as you know, Sir, rectified by the operators.

MR CHAIRMAN Yes, Mr Ram Awadesh Singh, you put your second supplementary.

श्री राम अवधेश सिंह : यह जो मद्रास में कल्पक्कामपुरम का जो बिजलीघर है, उसका डिजाइन कनेडियन टाइप का है और उसका सारा फेब्रिकेशन इंडियन डिजाइन पर हुआ है। जोय कण्डूर टाइप के रिएक्टर सारी दुनिया में लगे हैं कई जगह, वहाँ हैं तो क्या सारी दुनिया में ऐसी ही हैं? जैसे कि हमारे यहाँ हो जाया करता है। अगर होती है तो इनकी भी जांच हीनी चाहिए अथवा वहाँ जो मैनेजमेंट के लोग हैं उनकी गड़बड़ी है या जो बनाने वाले ठेकेदार हैं उन्होंने घटिया चीज लगा दीं। मंत्री जी इनका जवाब नहीं दे रहे हैं। मैं पाटिक्यूलर पूछ रहा हूँ कि यह बात किनकी वजह से हुई है। यह तो ग्लोबल प्रॉब्लम है तो श्री इस पर जवाब सही नहीं आ रहा है ये जवाब से बचना चाहते हैं।

SHRI K R NARAYANAN: Sir, the design of this reactor is actually based on the Canadian technology. But it has been considerably improved by Indian scientists and technicians. It is not exactly the same. It is an improved version of the original Canadian pressurised heavy water reactor because, I would submit,

though it incurred a loss for us, it was not a major defect; it is something which can occur in machines. This got stuck because of an instrumental error just as sometimes food pieces can be stuck in our throat not because we have any basic defect. But this has been improved; this has been rectified. And this kind of problem cannot be completely eliminated. It may occur sometimes, but there must be considerable care taken.

श्री राम अवधेश सिंह : यह क्वेश्चन का जवाब नहीं दे रहे हैं

MR. CHAIRMAN: Please sit down. Will you please sit down?

श्री राम अवधेश सिंह. जवाब तो हुआ नहीं*

MR. CHAIRMAN: This will not go on record. Shri Satya Prakash Malaviya.

SHRI SATYA PRAKASH MALAVIYA: In reply to Unstarred Question No. 395 of this House, of 6th November 1986, it has been stated that the procedures for fuel transfer operations have been suitably modified to eliminate the possibility of operational errors arising from wrong indications. What are the suitable modifications that have been made or effected?

SHRI K. R. NARAYANAN: They have made some technological adjustment.

I cannot exactly say what process was used. It is high technology, little beyond me at the moment. But certain adjustment had to be made in the fuel channel. This was in the way of an adjustment, not replacing or anything of that sort.

MR. CHAIRMAN: Mrs. Jayanthi Nataraian.

SHRI SATYA PRAKASH MALAVIYA: The Minister has earlier replied that modifications have been made, and . .

MR. CHAIRMAN: Mr. Malaviya, you have asked a very technical question: what are the modifications made? How

can the Minister know all the modifications that have been made? He will send you a technical reply if you want; his Department will send you a technical reply about whatever modifications have been made.

SHRIMATI JAYANTHI NATARAJAN: Sir, the hon. Minister said that the design of the reactor was based on Douglas point reactor in Canada. One of the major defects in the Indian reactor, according to the reports, is that it has great losses and leakage of heavy water—more than 5 to 8 times leakage that occurred in the original design in Douglas point. In the Madras atomic station we lose about 60 to 80 kg. of heavy water due to leakage. Has this point been considered and, if so, have any steps been taken to remedy the situation, because this is the major reason for the loss that is caused?

SHRI K. R. NARAYANAN: This is about leakage of heavy water, not about fuel.

SHRIMATI JAYANTHI NATARAJAN: That is why loss is caused, because the Canadian design was defective.

SHRI K. R. NARAYANAN: The loss of heavy water is a normal thing in a reactor. In fact it is the extent of loss which raises the problem. It can take place due to many reasons, quite often due to some maladjustment of the parts or something like that. But we believe that our reactor is as good as the Canadian reactor. In fact, we have considerably improved the design and the technology of it.

MR. CHAIRMAN: No, no That is not the question.

SHRI K. R. NARAYANAN: We are constantly trying. Leakage is a problem. I do not know whether it was the problem specific to Indian reactors of this type. This is a normal occurrence

MR. CHAIRMAN: The question which the hon. Member put is: Is the leakage in this reactor more than the normal?

SHRIMATI JAYANTHI NATARAJAN: Five to eight times more than . . .

MR CHAIRMAN: Yes

SHRI K R NARAYANAN: It was more than normal at that time. But it has been considerably reduced as a result of the attention given by the scientists. It has been reduced to 8 to 10 tonnes, which is the normal kind of leakage which takes place. It had gone to 20—25 tonnes at that time. But it has been brought back to 10 tonnes.

SHRI M KADHARSHA: Sir, the hon Minister has said that their plant is now generating 100 MW. The installed capacity, as I learn, is 235 MW. Why is the plant not generating the maximum capacity even after repairs? Not only the Madras Atomic Power Plant, almost all the plants were under closure at one time of the other, temporarily or permanently. The closure of Madras Atomic Power Plant for a short period has resulted in a loss of 59 crores. It means that even if a minor mishap is there, as the hon Minister claims, it will result in a loss of 59 crores to the Government exchequer. I do not know how much loss the Government will bear because most of the plants have been closed down on many occasions.

MR CHAIRMAN: Now, the question please.

SHRI M KADHARSHA: Sir, I would like to know from the hon Minister whether India lags behind in atomic technology. If we had not lagged behind, there would not have been such recurrence of incidents.

MR CHAIRMAN: You have to put the question.

SHRI M. KADHARSHA: If we lag behind, what steps is the Government going to take to make India a real atomic power (Interruptions)

SHRI K R NARAYANAN: Sir, as regards the working of the reactor at 110 MW, I would like to say that it is a procedural caution which we take after the reactor is started and the power is increased gradually. This is one of the reasons why reactor problem had arisen, what they call sudden start-up instead

of gradual start-up. It will go up to 130 MW from 110 MW even to 230 MW and sometimes even to its full capacity to 235 MW. I must say that just as you start a car, you cannot start it at top speed. Some time has to be given to it. This is the precaution we take for preserving the reactor in good order so that the heat generated does not become suddenly too high. This is the normal precaution. I can assure you that this capacity will be stopped up very soon. But this is a gradual process.

SHRI V GOPALSAMY: Mr Chairman, Sir, the recent meeting of the International Atomic Energy Agency in Vienna has come up with proposals covering safety as well as design aspects of nuclear reactors. More than 600 experts from all over the world participated in the conference. The proposals deserve careful consideration. Therefore, I would like to know from the Government whether they will consider the suggestions and the proposals of the recent conference.

MR CHAIRMAN: That is with regard to safety. This is in relation to the leakage and all that. That conference was about safety as a result of the Chernobyl incident.

SHRI V GOPALSAMY: They have given proposals regarding design aspect also.

MR CHAIRMAN: No. No. It relates to safety. Mr Kulkarni.

SHRI A G KULKARNI: I just want to enquire about the reply given by the hon Minister and the persistent query made during the last week. We want to know from the Government about the design aspect and particularly about this Madras Reactor case. We are dealing only with the Madras Atomic Power Station. He has rightly said it and I am not one to deprecate that the Indian intelligence and the Indian technocrats are no less intelligent than the foreign technicians. Indian technocrats are quite competent to deal with the problem. Sir, I would like to know whether the Government has taken proper care in choosing technology, whether

Indian-owned or in collaboration with foreign countries, I raise this question again and again that the Canadian technology, if I am correct has been withdrawn by Canada now and that they have done in Canada now and that they have done away with the heavy water. I want to know whether the Government is considering light water technology or the graphite route. Whatever route you want to go, it must be economic. As stated by the hon. Member, the capacity differs at present and the leakage is, whatever you may say, 20 tonnes or 8 tonnes. But the entire defect seems to be the original design from Canada. Will the Government please re-think over this matter and introduce a proper technology with the assistance of the Indian technocrats?

SHRI K. R. NARAYANAN: Sir, one test of the technological soundness of the Indian reactors is that even though some problems have arisen about shut down for a period and all that, none of our reactors has produced any accidents during the last 20 years. We have had no fatality at all. I think, this one measure of the efficacy of our nuclear construction technology. Secondly, about the Canadian reactors, they have not discarded it. They have improved it. The Canadians have not discarded that kind of reactor. They have improved it. They have remodelled it. And, in fact they are being sold. Our neighbour Pakistan has bought one of those reactors from Canada. So has Korea. Far from discarding, they have improved upon their original design as we have ourselves done.

SHRI A. G. KULKARNI: I want to know what is the difference between discarding and improving. That means, they have done away with the old model and brought in a new model. You say that you are perfecting a new model car. What is the improvement there?

MR. CHAIRMAN: The answer is satisfactory. Now, Mr. Aladi Aruna.

SHRI ALADI ARUNA alias V. ARUNACHALAM: Sir, the hon. Minister in his reply... (Interruptions) has said about the cost of loss of power generated to the State but he did not mention about the loss on the other factors. Sir, Mr. MHB Rao, the Executive Director of

the Nuclear Board has stated that the shut down of the Unit II for two months has caused a loss of Rs. 20 lakhs per day. Then, Sir, the Chairman of the Nuclear Board, Mr. Srinivasan has said that in the Unit I, the design feature of the gear ring competent is not satisfactory. And because of this the plant load factor is below the national average as far as Kalpakkam Unit is concerned. What is the present day plant load factor of this Unit? What steps are being taken by the Government to improve the position?

SHRI K. R. NARAYANAN: Sir, the plan load factor at Kalpakkam is not below the national average at all. For Madras, it is around 43, may be slightly below the thermal national average. But it is not very much below that.

MR. CHAIRMAN: What are you going to do to improve it?

SHRI K. R. NARAYANAN: Sir, we have to...

AN HON. MEMBER: Is it nuclear power or thermal power...

SHRI K. R. NARAYANAN: You consider about much safer and much lower technology of hydel and thermal power and just reflect what the plan load factor is. I don't think in comparison nuclear power stands less efficient than that.

MR. CHAIRMAN: No, no. The question is: What are you going to do to improve it?

SHRI DIPEN GHOSH: The Minister is being changed so frequently from Department to Department. He requires more time to acclimatise himself with Power. He was dealing with the foreign powers and not nuclear power. (Interruptions)

SHRI K. R. NARAYANAN: Sir, the hon. Member has taken up one reactor for a certain period. But as an average, except for the RAPP which is shut down for some time, the plant load factor has been between 55 and 65 and the available factor as high as 75 to 80. (Interruptions) You take a people for a short

period. If you take one reactor that is a different thing. The average for the whole number of reactors must be taken.

SHRI ALADI ARUNA alias V ARUNACHALAM What about the loss mentioned by the Executive Director and the defect mentioned by Mr Srinivasan?

SHRI A G KULKARNI Sir, it would be better if you reply.

SHRI K R NARAYANAN Sir, whatever defects have been pointed out, I am not saying that in a huge construction like this there will not be any defects in a certain part. The question is that we are capable of rectifying a defect if there is one. If a certain part is found to be defective, as you get in a car suppose you buy an ordinary Ambassador car, and you find some part defective you can replace it. We are capable of rectifying it.

MR CHAIRMAN We have become very wise on the subject. We must now go to the next question. **Question No 343**

Eleventh International Film Festival

*343 **SHRI K VASUDEVA PANICKER** Will the Minister of INFORMATION AND BROADCASTING be pleased to state

(a) what are the names of countries which propose to take part in the Eleventh International Film Festival of India to be held in Delhi in January, 1987;

(b) what are the names of the films, category-wise, proposed to be screened, and

(c) what are the names of the members of the jury, their experience and the names of the countries to which they belong?

THE MINISTER OF STATE IN THE MINISTRY OF INFORMATION AND BROADCASTING (SHRI AJIT PANJA):

(a) and (b) Invitations have been extended to all countries with whom India is having diplomatic relations. It is expected that most of the film producing countries will participate in the Festival. The last date for receiving the films is 30th November, 1986.

(c) The Jury for the Festival has not been finalised.

SHRI K VASUDEVA PANICKER Sir, I would like to know whether the films that will be selected will be offered for public viewing and if so in what media?

SHRI AJIT PANJA Sir, these will be shown in various cinema halls in Delhi. As this is the International Film Festival, the venue is Delhi. Sir, there are six cinema halls selected so far as Delhi is concerned. There are also two auditoriums—one is on the Siri Fort Road. It will be reserved for the official delegates and the press. So far as the Andhra Pradesh Bhavan auditorium is concerned, this will be open to the public and delegates. So far as the other cinema halls in Delhi are concerned, they will be Archana, Uphar and Savitri in South Delhi and Palace, Liberty and Plaza.

MR CHAIRMAN Now, your second supplementary

SHRI K VASUDEVA PANICKER : What will be the total expenditure likely to be incurred by the Government on this film festival?

SHRI AJIT PANJA Sir, the total expenditure expected is Rs 80.40 lakhs.

SHRI NAGEN SAIKIA. Mr. Chairman Sir, I want to know from the hon. Minister whether the selection of Indian films for the International Film Festival has already been made, and, if so, in what languages they are.

SHRI AJIT PANJA: Sir, the selection of Indian films for Indian Panorama 1987 has already been made. It is a long list. I can lay it on the Table of the House.

SHRI THANGABAALU Mr. Chairman, Sir, I would like to know whether the films that have been selected will also be open for public viewing, and if so in which cinema halls?

MR. CHAIRMAN. He has already answered that question (*Interruptions*). Please sit down.