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Rs.

3,04,171/-

Balwantrai Mehta 39. Vidya Bhavan,

New Delhi.

DR. PHULRENU GUHA: From the statement I find that three institutions did not receive any grant. Is it for bad report or no recommendations were received rom the State Government; if it is for the non-availability of the report from the State Government, may I know the name of the State Government?

DR. RAJENDRA KUMARI BAJ-PAI: That detail is not with me, Sir.

DR. PHULRENU GUHA: I could not hear.

MR. SPEAKER: That detail is not with her.

AN HON. MEMBER: It will be furnished to you.

DR. RAJENDRA KUMARI BAJ-PAI: The detail is not available. It will be furnished to you shortly.

DR. PHULRENU GUHA: May I know on what basis these amounts are recommended and sanctioned?

DR. RAJENDRA KUMARI BAJ-PAI: The basis for giving the grant is that first the State Governments make the recommendations. Secondly, the activity in which the organisation is engaged, that is gone into, and whether the previous year's grant has been utilised properly or not, that is also considered. If they have utilised the previous year's grant, and if the department is satisfied then only we release the grant. As I had already said. in answer to some other question some days back, we have revised our policy about the release of these grants, and the institutions which are receiving the grant. will be receiving only 50 per cent of the grant in the beginning and the remaining 50 per cent will be released after receiving the report from the State Government. We release it only then.

MR. SPEAKER: Shri Yashwantrao

Member is Gadakh Patil. The hon. absent.

Next question; Shri Satyondra Narayan Sinha.

Safety measures against nuclear power projects effluents

*716 SHRI SATYENDRA NARAIN SINHA: Will the PRIME MINISTER be pleased to state:

- (a) whether nuclear power projects including heavy water plants slated for construction in the Seventh Plan have been cleared from the environmental angle;
- (b) if so, what steps have been taken to keep effluents from these plants within tolerable limits of rediation; and
- (c) whether totally safe methods for disposals of the waste fuel rods and other byproducts have been enforced?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND IN THE DE-PARTMENTS OF OCEAN DEVELOP-MENT, ATOMIC ENERGY, ELECTRO-NICS AND SPACE (SHRI SHIVRAJ V. PATIL): Clearance from the Department of Environment is invariably obtained prior to start of construction of all projects.

(b) The effluents are constantly monitored to ensure compliance with prescribed limits in conformity with International Commission on Radiological Protection limits. Atomic Waste Management has been assigned high priority from the very inception of the Nuclear Energy Programme. Design of nuclear power plants incorporates multiple safety systems on the fail-safe principle to ensure that effluents from the plant including gaseous and liquid radioactive releases are well within the prescribed limits during normal and

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postulated off-normal situations.

Oral Answers

(c) Methods for disposing low and intermediate level radioactive wastes devvloped for their safe disposal is already in use all over the world and in all our nuclear facilities. Technology for vitrification and disposal of high level wastes arising from spent fuel has also been developed and proven in our country.

SHRI SATYENDRA **NARAYAN** SINHA: Is it a fact the Government wanted to set up a unuclear plant on the banks of river Kalia in Kaanataka and whether there were loud protests from the people there? What was the reaction of the Government to it.?

SHRI SHIVRAJ V. PATIL: It is proposed to have a nuclear plant in Karnataka, on the banks of the river Kalia in that area. Some citizens from that area had protested against the setting up of the plant there. But the stand of the Government is that precautions are taken to see that the plant does not cause any danger hazard to the public living there. All precautions are taken and we tried to expalin to the people that having a plant there does not cause any harm to the people.

SATYENDRA NARAYAN SHRI SINHA: Does the Government have any investigating safety body for monitoring the regulations to be applicable to the nuclear plants? And if so, is this body on the same lines as the Nuclear Regulations Board in the U.S.A. independent of the Ministry so that the public could go to them with their grievances and have them redressed independently?

SHRI SHIVRAJ V. PATIL: Under the present arrangement we have a Nuclear Power Board which is responsible for setting up of nuclear power reactors. There is a separate body which has nothing to do with the Nuclear Power Board. And this separate body looks after the safety aspect of the nuclear power stations. If there are any complaints, those complaints can go to them. They can examine them separately and then action can be taken. I would seek the permission of the Chair to inform this House that in

India we have taken all the steps which are necessary to provide protection. One more fact which I would like to bring to the notice of this House is that I am told that in about 4000 reactor years of operation of power reactor, nuclear power reactors in the world not a single person has died because of radiaton from nuclear reactor. The safety measures which are adopted in having these nuclear power stations are very very stringent and all precautions are taken. It has become very much clear to us that having nuclear power by having nuclear power reactors is not dangerous.

SHRI G. G. SWELL: Much is being made about the danger of rediation in these nuclear plants. It is right and proper, We cannot be too cautions. But I would like to know whether it is a fact that the people are exposed to much more REMS; (REM is rediation dosage) from the coal fired plants than from the nuclear plants & that people are also exposed to the rediation in certain industrial plants. I would like to know what measures you are taking to ensure that the people in the coal-fired plants and other plants are not exposed to unaccep table dosages of radiation.

SHRI SHIVRAJ V. PATIL: This problem of rediation has to be clearly understood by us. I am told that the man is exposed to natural radiation to the extent of 87.0 per cent, because of medical tests (x-rays, radiography) 11.5 per cent. because of weapons fall-out 0.5 per cent, occupational 0 4 per cent and because of miscellaneous reasons 0.5 per cent whereas discharge from nuclear power stations is 0.1 per cent. This is the manner of the rate of radiation to which men is exposed As far as radiation from coal power stations is concerned, it is a fact that the waste which comes out of the thermal power stations also emits some radiation. But that is not under the Atomic Energy. We are not looking after this. Moreover. the radiation from the waste of thermal power plants is not hazardous to the life and it is much below the prescribed limit.

[Translation]

SHRI BANWARI LAL PUROHIT:

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Mr. Speaker, Sir, the highest number of atomic reactors are in the U. S. A. and according to my information, even the orders already placed are being cancelled now. A number of States in the U.S.A. have banned atomic reactors. U.S.A. being the most advanced country, will the hon. Minister visit that country to make on the spot study there and then take a decision in the matter?

MR. SPEAKER: Would you like to accompany him?

(Interruptions)

MR. SPEAKER: You take Purohitji with you.

(Interruptions)

SHRI SHIVRAJ V. PATIL: Sir, I would like to say that atomic energy has assumed a greater importance in the field of energy generation now-a-days. So much so that in France, efforts are on to generate upto 75 per cent of the total energy through nuclear technology. Even in Japan, energy generated through nuclear technology is more than 25 per cent. It is said that in Japan efforts are being made to generate 60 per cent energy of its total requirement by using nuclear technology. Japan is one such country which knows very well what the radiation is. There are a large number of atomic reactors in the U.S.A. even today and they are generating more than India's total generation of energy through nuclear technology. Their rate of growth can be slightly less or more than ours, but their number is increasing steadily. U.S.A. have today more nuclear power stations as compared to our thermal power stations and hydel power stations taken together. Not only that, their number is continuously increasing there. Keeping this in view and also keeping in view our future energy requirements and the potential of nuclear energy, we can say that 75% of the total energy requirements of the world shall be obtained from nuclear technology. Secondly, we also want to increase the use of solar energy and have yet to develop suitable technology for that purpose. That technology can be developed in the next 70 to 80 years and then we would be able to get 20 per cent or more of our total energy requirements from that source. Till then,

we shall have to depend on the present technology and it can work well if fusion technology is developed.

[English]

SHRI P. KOLANDAIVELU: Sir, the research scholars say that because of the presence of the radioactive elements in the atomic power, handicapped children are being born. I would like to know whether it is a fact and supposing it is so, what are the preventive measures taken by the Government in this regard.

SHRI SHIVRAJ V. PATIL: I have already explained that this entire atmosphere of ours is not free from radiation. We get radiation from the sunlight; we get radiation from so many other things. I have explained the percentage of the total radiation existing in the atmosphere itself and I have already said that the radiation from natural source more than 80 per cent. Having explained this fact, I would like to make it clear that no child is born crippled because of the radiation from the nuclear power stations as such. But the fact remains that when radiation enters the cell and it mutates the gene, some deformity can occur, but the amount of radiation which is required for this purpose is much higher than the amount of radiation the man is exposed to because of these nuclear power stations.

11.47 hrs.

[MR. DEPUTY SPEAKER in the Chair]

MR. DEPUTY SPEAKER: Shri Pratap Bhanu Sharma.

SHRIS. JAIPAL REDDY: Only ruling party and allies, Sir.

MR. DEPUTY SPEAKER: No, no, he is Opposition. Who told you so?

SHRI PRATAP BHANU SHARMA: Sir, I would like to know whether it is a fact that our country has prepared a comprehensive programme of radioactive waste management and this was visualised quite earlier when the India's nuclear programme was planned. I would also

like to know whether any study has been made to evaluate the hazard potential of the radioactive wastes generated at different stages of the nuclear fuel cycle starting from mining and milling, fuel fabricacation, reactor operation and finally to the processing of the spent fuel, & secondly... (Interruptions)

MR. DEPUTY SPEAKER: No, you put one supplementary only.

SHRI PRATAP BHANU SHARMA: It is very relevant, Sir.

MR. DEPUTY SPEAKER: No. I am not allowing.

SHRI PRATAP BHANU SHARMA: It is very much relevant to the radiation problem, Sir. As we know, our country has developed the fast breeder test reactor and we have developed this technology in our country. Reprocessing of spent fuel, an essential requirement for the recycle of plutonium in fast breeder reactors, generates significant quantities of aqueous high level wastes which contains practically all the radioactivity of the spent fuel. So, I would like to know what effective steps our Government and our Nuclear Power Board are taking to store and dispose of such high level and alpha-contamidated liquid wastes.

SHRI SHIVRAJ V. PATIL: Sir, in the area of nuclear technology we have become self-reliant. The entire fuel cycle is mastered by us. We have the technology for establishing the reactors, we have the technology for producing the heavy water and we have the technology for disposing of the nuclear waste. As far as the radiation is concerned, in all the areas which relate to these activities, the radiation activity is also examined and we have developed the processes and technologies to see that nobody is affected because of this kind of radiation.

I have already said that we have developed the technology for disposing of the radioactive waste. Now the waste is liquified and it is put into a glass and then we have certain other procedures to be followed for dumping it deep in the ground. That kind of technology is available with us, We feel sure that nothing hazardous

is going to come out of this. At the same time I can assure the House and the hon. Member that at every stage we have taken precautions. We try to see that the prescribed limit is not crossed. The prescribed limit in India is for some of the items more stringent than the limit which is internationally prescribed. We have taken all the precautions on this count. There should not be any fear in the minds of the hon, Members on this point.

SHRI S. JAIPAL REDDY: Mr. Deputy Speaker, Sir. I am in agreement with the Ministers position that there is no escape from atomic power production. The most relevant thing is how we can tighten and streamline safety and antipollution measures in this area. Sir, the Minister knows fully well that nuclear fuel complex is located near Hyderabad. There are complaints about the radiation hazards exceeding the permissible limit from the wastes of this factory, Such complaints have been logged number of times, I would like to know from the Minister as to what has been done about this complex.

SHRI SHIVRAJ V. PATIL: I am thankful to the hon. Member for saying that the nuclear technology is going to be useful for us in the future for producing energy. At the same time, we are very particular to see that no danger is caused to the humam life and animal life and plant life because of the radiation. I can assure the hon. Member that no limit is exceeded in the Hyderabad area also. Wherever we have received complaints we have examined what is the position over there. It is found that the limit is not exceeded at sll. We have the procedure to see things inside the unit and outside the unit to ascertain whether the limit is exceeded or not. If it is exceeded there are certain procedures to be followed. No limit is exceeded at any time and that situation has not arisen.

Allocation of fund to Orissa for wasteland development and social forestry

*717." SHRI CHINTAMANI JENA: Will the PRIME MINISTER be pleased to state:

(a) the total amount allocated for wasteland development and social forestry schemes for the years 1984-85, 1985-86 and