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Title: Shri Gurudas Dasgupta called the attention of the Minister of State in the Prime Minister's Office to the situation arising out the incident of radiation exposure due to Cobalt-60 in Delhi and steps taken by the Government in this regard.

SHRI GURUDAS DASGUPTA (GHATAL): Madam, I call the attention of the Minister of Atomic Energy to the following matter of urgent public importance and request that he may make a statement thereon:

"The situation arising out of incident of radiation exposure due to Cobalt-60 in Delhi resulting in death of one person and critical injuries to several persons and steps taken by the Government in this regard."

MADAM SPEAKER: Hon. Minister, if the statement has been circulated, if it is alright with the Members, you may lay your statement on the Table of the House.

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY; MINISTER OF STATE OF THE MINISTRY OF EARTH SCIENCES; MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE; MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS; AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI PRITHVIRAJ CHAVAN): Madam, I will read the first part and then lay it on the Table.

MADAM SPEAKER: All right.

SHRI PRITHVIRAJ CHAVAN: A report of a patient admitted to a hospital with suspected radiation injuries led to discovery of radiation sources in a number of shops in the scrap market in Mayapuri Industrial Area, Delhi. On receipt of first information in Atomic Energy Regulatory Board (AERB), the Crisis Management Group (CMG) of DAE was alerted, which set in motion the subsequent operations as per existing procedures. These joint operations involving experts from AERB, BARC, Narora Atomic Power Station, DAE Emergency Response Centre, Delhi and National Disaster Response Force (NDRF) of National Disaster Management Authority (NDMA) led to identification and recovery of a number of items with high radiation over the period from 8 April to 15 April 2010. The radiation source was identified to be radioactive Cobalt-60. These items were recovered and placed in lead-shielded containers and sent to Narora Atomic Power Station for further examination and safe disposal; Delhi Police registered an FIR on 8<sup>th</sup> April, 2010 and have been investigating the case.

\*In these incidents, seven persons have been found to be affected by radiation injuries and admitted to hospitals for treatment. One of the injured persons who was more severely affected has since died on 26.4.2010. The other persons affected by radiation are under treatment. Bio-dosimetry has been carried out at Bhabha Atomic Research Centre (BARC) and Institute of Nuclear Medicine and Allied Sciences (INMAS) to evaluate doses received by these persons.

Delhi Police have traced the origin of the radioactive material recovered in Mayapuri to a Gamma Cell (also known as Gamma Irradiation Chamber or GIC) from the Chemistry Department of Delhi University. As informed by the Delhi Police the Gamma Cell was sold as scrap. The scrap dealer cut open the protective lead shielding for sale thus exposing the radioactive Cobalt-60 sources.

Gamma Cells are used mainly for R&D activities such as irradiation of chemical/biological/food/blood samples. They are well shielded with built-in safety design features, including remote handling of samples and are safe in their normal configuration.

The Gamma Cell at the Delhi University was imported from Canada in 1969. Authorization for its operation had been given in January 1970 by the erstwhile Directorate of Radiation Protection (DRP), BARC, the agency responsible for regulating radiation sources at that time. As per rules the pro-Vice Chancellor of the University was required to give an undertaking, which was obtained, that there would be no sale or transfer of this equipment. For a couple of years thereafter the University was in communication with BARC in connection with the dosimetry of personnel involved in work on this device. It is reported that the Gamma Cell has not been in use for more than twenty years.

After the origin of the Gamma Cell was ascertained, the supplier was contacted, and details of the equipment obtained. The information received indicates that the cell had 16 Cobalt-60 source pencils, each pencil containing 7 cobalt slugs arranged in a 48 slot stainless steel cylindrical cage, thus totaling 112 slugs of Cobalt-60.

The radioactive material transferred to Narora has been examined. All the 112 slugs have been accounted for in the recovered material. This finding, together with radiation monitoring carried out in the Mayapuri market earlier, gives confidence that the market has been cleared of the Cobalt-60 sources, barring some traces of dust or particles in the shop where the pieces were cut. These do not pose any significant health hazard.

As per the current requirements under Atomic Energy Radiation Protection Rules and AERB Safety Guide on Consenting Process for Radiation Facilities (AERB-SG-RF/G-3), installation of any radiation equipment such as Gamma Cells requires AERB's clearance at different stages, including layout approval of the facility, type approval of the equipment, and authorization for commissioning and use. There is a further stipulation of periodic reporting of the status of operation of the radiation facility. Authorization is granted for a limited period of 5 years at a time and there is a requirement for safe disposal of radioactive material at the end of the useful life of the equipment.

This incident was caused by the unauthorized disposal of the Gamma Cell by Delhi University as scrap in violation of the Atomic Energy (Safe Disposal of Radioactive Waste) Rules and Atomic Energy (Radiation Protection) Rules promulgated under the Atomic Energy Act, 1962.

Delhi University has been issued a show-cause notice by AERB on 29th April, 2010 and asked to submit its explanation on the violations within a period of two weeks. In the meantime, AERB has directed Delhi University to immediately suspend all activities involving use of radiation sources.

It may be recalled that the Government had set up the National Disaster Management Authority (NDMA) in 2005. The NDMA has raised and trained four battalions of National Disaster Response Force (NDRF) for responding to radiological emergencies. Also the DAE has established eighteen well-equipped Emergency Response Centres at different parts of the country for preparedness and response to any radiological emergency. NDMA has been entrusted with the responsibility to co-ordinate, review and assess our capabilities and infrastructure to detect, prevent and respond to radiological incidents of all kinds. Four more battalions of NDRF (in addition to the existing four) are being trained and equipped to respond to radiation emergencies. To further strengthen the response capability, around 1000 police stations in 35 major cities are being equipped with radiation monitors and personal protective gear by the NDMA.

Although the current situation was caused by legally imported equipment which was unauthorisedly disposed off, we are also conscious of the need to prevent the unauthorized import of radioactive material. A variety of radioactive material detection equipment are being installed at various border points –seaports, airports and land ports. The detection capabilities have been aimed as per international guidelines and specifications (Mega Port Initiative compliant) to detect a variety of radioactive substances emitting gamma rays and neutrons. In addition, portable equipments are being procured for use by National Disaster Response Force of NDMA and by Emergency Response Teams of the DAE for radiation detection. Capacity is being created for inspection of trucks/containers passing on the road (vehicle monitors), portal monitors to inspect personnel at entry/exit, handheld detection equipment for close scrutiny including isotope identification.

I would like to emphasise that this incident of radiation exposure has nothing to do with any of the DAE facilities or activities.

I would also like to assure this august house that all possible care is being taken to ensure that the country is prepared to handle any radiological emergency arising in the public domain.\*

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SHRI GURUDAS DASGUPTA (GHATAL): Madam, I have gone through the statement as carefully as possible. In most of the cases the Ministers replying to Calling Attention try to become innocent. The same can be said with regard to this statement, that this is an innocent statement.

The statement expresses the chain of events but does not answer the basic questions that arise out of the incident. Therefore, it appears even now that the Ministry has not been able to realize fully the implications of such a disaster. Mayapuri scrap market was the place where the radiation took place. One person died. He is a very poor man, a manual

labourer. Six people were injured; one of them is fighting for life even today. Before I go into some facts, I will start with a question to the hon. Minister.

In today's Order Paper, there is an item whereby, Shri Prithviraj Chavan is going to seek leave of the House to introduce Civil Liability for Nuclear Damage Bill. May I ask the hon. Minister, while the Bill is sought to be moved, to limit the liability of the foreign firms, what is the law in India? Is there any law in India, which seeks to protect the victims of radiological accidents? As far as I know, there is no such law. The statement should have said that after this incident, the Government has become aware of such a law and that it would be done. But no such assurance from the Minister has been given.

What is the basic question? The management of waste and regulation of the dumping of the waste – this is the basic question. Why am I raising this? It is because the recycling of the waste has become a profitable enterprise in India and a huge manpower is associated with it. Nearly 15 lakh people are involved throughout the country in handling the waste. This has become a business on a very large scale in the country.

As per my information, 64 lakh tonnes of waste was dumped in India by the developed countries or the so-called advanced countries. I do not know whether the hon. Minister is aware of it. Domestically we are producing 59 lakh tonnes of waste every year. How is it going to be managed? The waste may include radioactive materials also. Why? The radioactive materials are used for health therapy, for cancer treatment; it is also used for experiments in colleges. It is used for industrial production also.

Therefore, monitoring of the management of waste is a vital task of the Government. Has the Government become aware of this, after the accident had taken place? I will give only two examples, whereby the hon. Minister should feel that Atomic Energy Regulatory Board is not doing its job. That is the organization which is to look after the management of the radioactive materials in the country. What is the figure? 1485 institutions are there in India who use 7850 nuclear gadgets. This is the number in India. How many were inspected? There is a regulation – this is what the Minister said; and I admit that there is a regulation. But as it happens in the case of all Government laws, the laws are not enforced; and the agencies that are supposed to take care of the regulation, sleeps over the responsibility. That is why, only 16 were inspected out of 1485 institutions in 2008-09.

In the second case, only 39 inspections were done for 505 industrial units who use radiography as a method and as a technique. It is a serious dereliction of duty. Therefore, my question is, is the hon. Minister aware that the Atomic Energy Regulatory Board has not been doing the job of inspection. Why has this happened? It was because there was no inspection done. Gamma Irradiator was purchased by the Chemistry Department of Delhi University in 1967. He is admitting the fact that it was used but he does not admit the other fact. It was used till 1985, which means 25 years ago it was used. Then the equipment was sealed in a room which was locked from outside. Can you believe that this Gamma Irradiator was sold out by the Chemistry Department of Delhi University, where there are academicians, people of character and commitment, without knowing whether the radiation was there or not? This has happened. One person who deals with the scrap material business purchased it. Therefore, three things appear from this: there was no inspection of the Chemistry Department of Delhi University by the Atomic Energy Regulatory Board, the professors, teachers and the Vice Chancellor did not try to find out whether the radioactive material was still there or not and it was sold as a scrap. It has happened in a civilised country, more so in Delhi and more so in the Delhi University. Can it happen? But it has happened.

After this machine was taken to Mayapuri, it was broken and 40 radioactive pencils were made out of it. Those pencils were then sold. What is the story? The story is that the Atomic Energy Regulatory Board did not inspect. The University did not have a safety officer. Vice Chancellor administration, before selling the material as waste, did not find out whether there was radioactive material and the poor worker has died. Delhi University is saying that it is ready to pay the money. Money in exchange of life!

It is because the Government has no law in this country which seeks to compensate a victim of radiological crisis or radiological problem. We are interested to have a law for the foreign country but within the country there is no law. Therefore, the questions are:

- Was there an inspector in the college?
- Whether Atomic Energy Regulatory Board did carry out the inspection as it is according to law should be done regularly?
- Whether any case of dereliction of duty has been registered against the Management of Delhi University?

They must be brought to book according to the law. They have not done their job.

SHRI REWATI RAMAN SINGH (ALLAHABAD): Especially the Vice-Chancellor.

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SHRI GURUDAS DASGUPTA: Not only the Vice-Chancellor but everybody. What Committee it was which was appointed to clear the garbage? What academicians they are! What irresponsible people they are! Criminal law and prosecution must be instituted against the people who are responsible for clearing the garbage to be sold in the market which was essentially radioactive. I would like to know as to when the law is going to be brought before the country. Since there is no law, does the Government propose to bring a law?

Lastly, did the Management of Delhi University want inspection to be done? Did they know that there is a law that there should be an inspection done? Inspection was not done by the Atomic Energy Board but did they ask for it? I am raising these questions because Madam I am pained at the failure of inspection, at the failure of the Management of Delhi University and at the failure of my friend, the Minister of State who has not realized the seriousness of the country.

There are nuclear power projects going on in the country and more will be coming. There has to be a strict policy for the disposal of the radioactive materials. There has to be serious monitoring. There has to be a serious policy. There has to be serious law and the Government must be there to take care that the law is being implemented. I am sorry, this is a human disaster arising out of the failure of the administration and the Government. I send my condolences to the person who has died.

MADAM SPEAKER: Shri Kaushalendra Kumar, please ask your clarificatory questions.

**श्री कौशलेन्द्र कुमार (नालंदा):** माननीय अध्यक्ष महोदया, आपने मुझे ध्यानाकर्षण प्रस्ताव पर बोलने का मौका दिया, इसके लिए मैं आपको बहुत-बहुत धन्यवाद देता हूँ। यह सरकारी कार्मिकों की लापरवाही का पहला उदाहरण नहीं है। गलती कुछेक करते हैं और बदनाम सारी व्यवस्था होती है। मेरा यह कहना है कि संवेदनशील या घातक पदार्थों का वितरण, भंडारण व निस्तारण केवल सुयोग्य अधिकारियों के हाथों में होना चाहिए, जिन्हें इनके खतरों की जानकारी हो व वितरण, भंडारण और निस्तारण का जिन्होंने कम से कम न्यूनतम प्रशिक्षण लिया हो। हमारी शैक्षणिक ही नहीं बल्कि अन्य संस्थानों की प्रयोगशालाओं में अनेकों प्रकार के कम घातक से लेकर अत्यधिक घातक रसायनों व रेडियोधर्मी पदार्थों का खुले आम प्रयोग होता है। इनके प्रभाव व विकरण के बारे में इनसे जुड़े समस्त कर्मचारियों का न्यूनतम प्रशिक्षण होना चाहिए व उनकी लिखित स्वीकृति के बाद ही उनके वितरण, भंडारण या निस्तारण संबंधी कोई कार्रवाई होनी चाहिए।

इस संबंध में मैं आपका ध्यान ई-वेस्ट की तरफ भी दिलाना चाहूंगा कि जिसका बेरोकटोक आयात हो रहा है, जिनमें भी कम घातक पदार्थों की बहुतायत होती है, जिनसे कैंसर व अन्य विभिन्न प्रकार की बीमारियां फैल सकती हैं। इसके आयात के बारे में भी कोई दिशा-निर्देश होने चाहिए या कोई नियामक संस्था का गठन होना चाहिए, जिससे देश की जनता सुरक्षित रहे और भूमि, जल, वायु आदि प्रदूषित न हों व पर्यावरण स्वस्थ रहे।

अब मैं वर्तमान घटना की ओर माननीय सदन का ध्यान आकृष्ट करना चाहूंगा। दिल्ली विश्वविद्यालय ने गामा सेल को वर्ष 1970 में एटोमिक इनर्जी कनाडा लिमिटेड से खरीदा था। 1985 में विश्वविद्यालय में इसका इस्तेमाल बंद कर दिया गया था। विश्वविद्यालय के अधिकारियों ने 26 फरवरी, 2010 को यह मायापुरी के स्कैप डीलर हरचरण सिंह भोला को डेढ़ लाख रुपये में बेचा था। जब रहस्य खुला कि मायापुरी में एक दुकान के कबाड़ से रेडियोएक्टिव पदार्थ पाया गया, जो दिल्ली विश्वविद्यालय से आया था। इसका इस्तेमाल दिल्ली विश्वविद्यालय के कैमिस्ट्री विभाग के छात्रों ने प्रयोग के लिए किया था।

**अध्यक्ष महोदया :** आप कृपया क्लेरिफिकेटरी प्रश्न पूछिये।

**श्री कौशलेन्द्र कुमार :** मैडम, मैं उसी बात को सदन के ध्यान में लाना चाहता हूँ कि जब इस बात की जानकारी थी और यदि जानकारी नहीं थी तो मंत्री जी का जवाब एकदम स्पष्ट आना चाहिए। आज उस बात की जांच होनी चाहिये कि यूनीवर्सिटी के प्रोफेसर को जब तक मालूम था कि गामा सेल घातक है तो उसे इस तरह से क्यों बेचा गया? मैं मंत्री महोदय से यह भी जानना चाहता हूँ कि इसकी चपेट में आने वाला व्यक्ति राजेन्द्र नाम का आदमी था जिसे मुआवजा दिया गया या नहीं? जो पांच आदमी घायल हुये हैं, क्या उन्हें मुआवजा दिया गया या नहीं? मैं यह सवाल भी उठाना चाहता हूँ कि दिल्ली विश्वविद्यालय के कुलपति श्री दीपक पेंटल विज्ञान से हैं और समुचित जानकारी रखते हैं, बिना उनकी जानकारी के यह संभव नहीं है कि कबाड़ मायापुरी में बेचा गया। मैं मंत्री जी से यह भी जानना चाहता हूँ कि क्या उनकी जानकारी ऐसी है कि यह श्री दीपक पेंटल की नैतिक जिम्मेवारी थी ...(व्यवधान)

**अध्यक्ष महोदया :** ठीक है। आपका हो गया। श्रीमती सुमित्रा महाजन ।

**श्रीमती सुमित्रा महाजन (इन्दौर):** अध्यक्ष महोदया, यहां पर जो चर्चा हो रही है, मैं कहुंगी कि वह केवल साइंटिफिक मामलों तक ही सीमित नहीं होनी चाहिये। इसे बहुत गंभीरता से लेना पड़ेगा। पहले ही हम कहते हैं कि गरीब मंहंगाई से मर रहा है या मृत्यु जैसा जीवन जी रहा है। आज ये घटनायें हो रही हैं। हम कहते हैं कि कबाड़ का काम करने वाला जो व्यक्ति है, कबाड़ खरीदने वाला हो सकता है कि वह पैसे वाला हो लेकिन वहां उन चीजों को अलग करके कबाड़ में काम करने वाला जो व्यक्ति है, वह कहीं न कहीं छोटी सी झुग्गी झोंपड़ी में रहने वाला सादा श्रमिक है, गरीब तबके का आदमी है। इसलिये जो भुगतेंगे, जो मर गया तो कभी कभी लगता है कि कम से कम उसे मृत्यु प्राप्त हो गई लेकिन ऐसे रेडियोधर्मी पदार्थों से जिससे विकर्ण होता है, ब्लड में जिसको जाता है, वह जिन्दा भी रहता है तो मृत्यु से भी बदतर संकट या मृत्यु से भी बदतर यातनायें उसे सहनी पड़ती हैं। मैं इस कम्पनसेशन को इससे इसलिये जोड़ रही हूँ कि आने वाला बिल ज्यादातर कम्पनसेशन से जुड़ा हुआ है। इसलिये हम क्या केवल मौत के सौदागर बनकर कम्पनसेशन की बात करेंगे? जिनको मृत्यु नहीं आती है, उनकी जिन्दगी मौत से बदतर होती है, क्या उसके लिये हम कोई बात नहीं करेंगे?

अध्यक्ष महोदया, माननीय गुरुदास जी ने जो प्रश्न पूछा, उसे मैं रिपीट नहीं करूंगी लेकिन एक बात जरूर है कि जिस तरीके से ए.आर.बी का जो उत्तर है, कि हमारे फारमेशन से पहले यह खरीदा गया। अगर दिल्ली यूनिवर्सिटी के द्वारा खरीदा भी गया हो तो भी इश्यू से लेकर डिस्पोजल तक उसकी एक प्रक्रिया होती है, उसकी अंडरटेकिंग होती है। उस समय बीएआरसी था, उनसे इन्होंने अंडरटेकिंग दी हुई थी। उस प्रक्रिया का कहीं न कहीं पालन नहीं किया गया और वह न करते हुये जिस तरीके से यह डिस्पोजल किया गया है, और अगर अब ए.आर.बी. यह कहे कि हमारे आने से पहले था। अभी जो बात बात बताई गई कि उन्हें जो निरीक्षण करना चाहिये था, कई जगह यह मशीनरी उपयोग में आ रही है जिसमें रेडियोएक्टिव कण हैं, अस्पताल में हैं और पूरे हिन्दुस्तान में हैं। जो वाक्या हुआ, मैं उसे दोहराऊंगी नहीं लेकिन यह निरीक्षण नहीं होता है। क्या आप इसे किमिनल नैग्लिजेंस के अंदर लेंगे? This is a criminal negligence and not a simple negligence. और जिस तरीके से दिल्ली यूनिवर्सिटी के प्रोफेसर हो या प्रिंसिपल हो, उनको ट्रेनिंग नहीं है। कहने के लिये यह कैमिस्ट्री के प्रोफेसर हैं क्योंकि उन्हें सारी बातों की जानकारी होती है, प्लुमराइजेशन, रेडिएशन, कैमिस्ट्री, फिजिक्स, अलग अलग बड़े कोर्सेस यहां चलते हैं और बहुत ट्रेड प्रोफेसर मोटी मोटी तनख्वाहें लेने वाले हैं। हो सकता है कि ये बुकिंग पढ़ाते हैं, क्या उन्हें भी किमिनल नैग्लिजेंस के अंतर्गत लिया जायेगा?...**(व्यवधान)**

**अध्यक्ष महोदया :** बस हो गया। ध्यानाकर्षण में केवल एक प्रश्न पूछा जाता है।

**श्रीमती सुमित्रा महाजन :** अध्यक्ष महोदया, मैं प्रश्न ही पूछ रही हूँ। दूसरी बात यह है कि हमारे जैसे सामान्य व्यक्ति के लिये यह प्रश्न आता है। पेपर में दो प्रकार के स्टेटमेंट्स आये हैं। एक स्टेटमेंट यह आया कि कुछ बी.ए.आर.सी. के अधिकारी का कथन था कि मायापुरी इलाके में कबाड़ में जो चीज मिली है, वह वायर श्रेप की है, यह ई-वेस्ट हो सकता है। वहां जो विश्वविद्यालय में कबाड़ के रूप में गये हैं, It is a pencil cylinder.

और वे भी अभी प्राप्त नहीं हुए हैं। उसमें यह बात बतायी गयी है कि वर्ष 1968 में खरीदी गयी है, यूज में नहीं आ रही थी, लेकिन उसकी आयु 52 साल की थी, ऐसी भी एक बात चर्चा में है। अभी तो केवल 40 साल हुए हैं, मतलब 12 साल तक अभी वह जीवित है। क्या इसका भी परीक्षण किया गया है?

महोदय, मैं तीसरी बात पूछना चाहूंगी कि बाहर से बहुत सारा इंटरनेशनल स्कैप हिन्दुस्तान में जगह-जगह आता रहता है। आपने अपने स्टेटमेंट में यह कहा है कि जो नेशनल डिजॉस्टर रिस्पॉन्स फोर्स है, उन्हें आपने ट्रेनिंग दी हुई है, लेकिन जो कस्टम के ऑफिसर हैं, जो इसकी जांच करते हैं क्योंकि आने आप कह रहे हैं कि हम इसे लगायेंगे। Radioactive material equipment are being installed.

अब आप लगायेंगे, यानी इसके पहले चाहे जो भी कोई कचरा यहां आया हो। क्या कस्टम के अधिकारियों को इस प्रकार की कोई ट्रेनिंग दी गयी थी? क्या वहां पर इस प्रकार का कोई डिवाइस लगा हुआ था कि इस प्रकार का कचरा हिन्दुस्तान में न आये? अगर आप अब लगायेंगे यानी इसके पहले नहीं लगाया गया था तो क्या यह कहीं न कहीं सरकार का किमिनल नैग्लिजेंस नहीं हो रहा है। मैं यह भी जानना चाहूंगी।

**अध्यक्ष महोदया :** अब आप समाप्त कीजिये।

**श्रीमती सुमित्रा महाजन :** महोदय, एक बात और है कि बीएआरसी को ट्रेनिंग देनी है। जहां-जहां इस प्रकार के ऑफिसर नहीं हैं।...**(व्यवधान)**

**अध्यक्ष महोदया :** ठीक है, धन्यवाद।

**श्रीमती सुमित्रा महाजन :** महोदय, यह देखना तो पड़ेगा ना।

**अध्यक्ष महोदया :** जी हां, ठीक है। अब आप समाप्त कीजिये।

**श्रीमती सुमित्रा महाजन :** महोदय, हमें यह भी जानकारी मिल जाये कि बीएआरसी ने कितने लोगों को ट्रेनिंग दी। वहां काम करने वाले प्रोफेसरस या असिस्टेंट जो भी हैं, क्या उन्हें इस प्रकार की ट्रेनिंग दी गयी है, वहां उन्हें जो उपकरण लगते हैं, हैंड ग्लोव्स आदि, क्या वहां वे उपयोग में आते हैं? क्या इस बात का कोई निरीक्षण, परीक्षण किया गया है? इन सब बातों को जानकारी मंत्री जी को देनी चाहिए। यह बहुत गंभीर मामला है, गरीब के जीवन से खिलवाड़ करने वाला मामला है, इसलिए मैं पूछ रही हूँ।

SHRI B. MAHTAB (CUTTACK): Madam, thank you. It is a very pathetic case of cobalt 60 in Delhi which has awakened us from slumber. If it would not have occurred in Mayapuri in Delhi, I doubt whether the Government and the society at large would have become conscious about the hazardous wastes that are lying around and is being used by different industries and educational institutions in our country. With every twist, I am pained to mention here, it reminds us of how vulnerable we are to catastrophes. How callous we are even in dealing with radioactive material? How blissfully indifferent we are to the extensive damage to life we continue to cause through our criminal negligence? This was not a behavioral feat of any responsible nation, not of a nuclear power. First we jabbered that cobalt 60 that was thrust on us by evil external sources. Was it a deadly bomb in making? That was the question being asked. It revealed how chillingly inadequate our import

regulations were? We had no clue where the radio active material had come from? Who had sent it? How it reached one of the busiest and thickly populated markets of the country. I am reminded of the Statement that was given by the hon. Minister of State for Atomic Energy in the other House and when we compare it with the Statement that has been given here today one feels how inadequate we were in collecting information. There is a system failure.

In India cameras that used cobalt 60 were phased out in the 90s. The use and disposal of all such radio active material is strictly supervised in the country. But Mayapuri radiation highlights the threat that lurks in our midst. Contaminated scrap was identified as the cause of setting off radiation detector alarm in France in the year 2000. A worker in a nuclear plant was wearing a watch that had contaminated bracelet pins made with steel supplied by a plant in China from which 100 kgs contaminated steel was recovered.

I am not mentioning it here. I think the hon. Minister is aware as to what had happened in Mexico. The radioactive material had travelled from United States to Mexico and the whole steel industry was in ruins for five years. I am not going into that. But in 2000, in Thailand, the same year, a disused Cobalt-60 teletherapy source caused a death and a major scare.

Is it true that Physics, Chemistry and Geology Departments of Delhi University have radioactive substance in their labs and had held some auctions recently to dispose of their waste? I want to know whether Atomic Energy Regulatory Board (AERB) has no proper inventory of such radioactive sources in hundreds of machines lying all over the country? Is it true that Bhaba Atomic Research Centre is responsible to dispose of radioactive material? Is it true that BARC has recovered some lost radioactive needles from scrap markets and hospital drains and even crematoriums? Is any investigation being done to find out radioactive metal present in steel that we use everyday? Is it true that Cobalt-60 isotopes are used widely in medical and industrial applications including food processing industries? I want to know whether the regulatory system of inspection and monitoring put in place by the AERB, though detailed and elaborate, is actually not foolproof? What mechanism have you got to punish those due to non-compliance and laxity on the part of end-users?

SHRI ARJUN CHARAN SETHI (BHADRAK): Madam Speaker, I will confine my observations to the statement made by the hon. Minister for State, Shri Chavan because a lot of area has been covered by the hon. Members who spoke before me. I will confine to the main points arising from the statement laid on the Table of the House.

Madam, I would like to quote one sentence from the statement of the hon. Minister: "As per the rules, the pro-Vice Chancellor of the University was required to give an undertaking, which was obtained, that there would be no sale or transfer of this equipment." This is the undertaking which the pro-Vice Chancellor of the Delhi University has given. How can it be sold then? I think this is the crux of the matter. This is the undertaking which they have given and they have sold it.

As has been stated here, the University authorities have utterly failed in their duties. Due to the utter negligence of the University authorities, this particular incident has happened.

The hon. Minister also stated that an FIR has been lodged. I would like to know from the hon. Minister against whom has the FIR been lodged. Was the FIR lodged against the particular persons of the University responsible for this incident? These are very important questions because this all has happened due to the failure of the University authorities. As has been stated by the hon. Member, Shri Dasgupta, they are all academicians.

They are all Professors; they are not like common people on the streets; they are not people like us. They are all highly educated people. How can this happen?

Another point is this. In this particular Statement, it has been mentioned:

"For a couple of years thereafter the University was in communication with BARC in connection with the dosimetry of personnel involved in work on this device. It is reported that the Gamma Cell has not been in use for more than twenty years."

That means the Delhi University was always having consultation or communication with the BARC for inspection. We would like to know whether the BARC has conducted any inspection. If they have conducted any inspection, what was their advice? What was their report?

These are very crucial questions. Hon. Speaker, you please direct the hon. Minister to respond to these questions. This is very important and this is the first time that such an incident has happened due to the negligence of the academicians and due to the negligence of University authorities. Thank you.

SHRI PRITHVIRAJ CHAVAN: Hon. Speaker, this debate through the Calling Attention is very important in highlighting a very tragic incident, which the Government takes very seriously. There has been a loss of life and some people got injured. We have given a very exhaustive Statement, stating facts as they became known to us and nothing has been kept away from the House because this is an area where we are all very seriously concerned.

Before I come to the questions, I would just like to state that nuclear energy can be used for generation of electrical energy. We have nineteen reactors producing energy. I am happy to say that the entire atomic energy programme of the Government of India has been extremely safe and there have been procedures in place which have always worked.

I can assure the House that the entire electricity generation programme of atomic energy is completely safe. This current incident did not occur from the activities of the DAE. The other peaceful uses of atomic energy are medical use, industrial radiography, nuclear gauging and research.

This was an instrument, as we have been informed, imported by the Delhi University in 1970 after due licence was taken from the Department of Atomic Energy and a due undertaking was given, as has been mentioned, by the highest authorities of the University that it will not be sold off. Obviously a mistake was committed by the Delhi University in not adhering to their own undertaking which they gave us.

The equipment was imported from Canada. Earlier we did not know where it came from and, therefore, there was a lot of confusion. But thanks to the Delhi Police, they ultimately traced this equipment to Delhi University and then we found out which Company has sold it. This Company in Canada had sold this Gamma Chamber to five other locations also. They have all been located. But unfortunately because the equipment were not used, perhaps they lost control, they did not keep a proper account of what was happening and it got sold to a scrap dealer. It was a very tragic incident. The Delhi Police has lodged an FIR. The FIR has been upgraded after the death of a person.

SHRI GURUDAS DASGUPTA : Against whom the FIR has been lodged?

SHRI PRITHVIRAJ CHAVAN: The Delhi Police will take appropriate action against all those who are guilty. It is an on-going investigation and I cannot tell you how the investigation goes on. But I can assure you that no guilty person will be spared.

First of all, the issue raised was on peaceful uses of nuclear energy.

The second issue has been raised which is about the scrap. Obviously, the scrap was generated here by the Delhi University and sold to a scrap dealer. There is also a serious concern which I had addressed in my statement whether the radioactive scrap could be imported or not. That is an issue which is seriously being dealt with by the Disaster Management Authority which was set up recently, it is being dealt with by the Ministry of Home Affairs and it is being dealt with by the Ministry of Commerce. That is a separate subject. I would not like to take the time of the House on this. But I would like to assure the House that adequate equipment to check the incoming consignments of scrap are being put in place. We already have two container scanners in two airports. That is being done. So, it is not dealing with scrap which is imported, it is something which happened in Delhi University.

Now, a specific question been asked by the hon. Members. I am thankful to the suggestions and the questions which they raised.

The first question asked by Shri Gurudas Dasgupta is as to what is the law on compensation. I would like to share with the House that unfortunately the fact remains that currently there is no law on compensation coming out of radiological incidence. That is precisely the reason why we are moving to set in a legal regime. ...(*Interruptions*)

SHRI GURUDAS DASGUPTA : Are you going to bring in a law?

SHRI PRITHVIRAJ CHAVAN: I am coming to that. Please give me some time.

Madam, we had a very unfortunate incident in Bhopal. We had no law and people had to go from pillar to post for compensation. Therefore, in 1991, this Parliament enacted a law which is called, 'Public Liability Insurance Law'. But in that law, nuclear and radiological incidents are specifically excluded. So, there is a void. We appreciate that. I think we will

have to look at the compensation regime out of radiological incidence. There are two types of incidence. One is the incidence which could happen out of power production, as I said – the first part of atomic energy and second is where nuclear energy is used for research purposes and for medical purposes. There has to be a law. I share the concern expressed by the hon. Members. We will have to have a regime where equipment user will have to take insurance and will have to take an undertaking. ...(*Interruptions*)

SHRI GURUDAS DASGUPTA: What about the law?

SHRI PRITHVIRAJ CHAVAN: That is what I am sharing with you. We will have to have a law to cover the incidence of nuclear accidents like the one we had in the Delhi University. There has to be insurance taken. There has to be compensation amount fixed like we did in the 1991 law except we left out radiological incidents.

Second thing is about the role of the AERB. As has been stated in the statement, the AERB came into being in 1983 and before that it was the Atomic Energy Department which had a Directorate of Radiation Protection. The permission was taken from the Directorate. But, obviously, in spite of the undertaking given by the Delhi University, they did not adhere to the undertaking and we had this unfortunate incident. ...(*Interruptions*)

SHRI GURUDAS DASGUPTA: Was there any inspection?

MADAM SPEAKER: Shri Dasgupta, you have asked your question. Let him reply.

SHRI PRITHVIRAJ CHAVAN: Madam, as I said, atomic energy use is for peaceful purposes. We permit use of atomic energy in medical use, industrial use and research purposes. There are 10,000 sources in the country with about 3,000 organisations. The licence is only given to very responsible people besides organisations and universities. There are different categories of equipment – equipment which can cause large harm is put in one category. There is B category, C category and there are six categories like that. An inspection is carried out as part of a routine where we consider that there is a danger. This equipment inherently was considered safe because led sheets were given to the highest academic institutions in the world. I think they did not follow the strict safety rules and we had this accident. But I take the point that the law needs to be in the place. The regime has to be strengthened.

A question was also asked whether AERB has inventoried. AERB has a complete inventory of over 10,000 sources of this nature which has been used for peaceful purposes in 3,000 installations. The inventory is all there. There have to be reports filed that inspections are carried out. But I appreciate the point that we need to further strengthen this regime so that even inadvertently somebody should not do something like this incident which happened in Delhi.

SHRI GURUDAS DASGUPTA : It means no inspection was done.

SHRI PRITHVIRAJ CHAVAN: At 10,000 places the inspections are done.

SHRI GURUDAS DASGUPTA : In this place, inspection was not done.

SHRI PRITHVIRAJ CHAVAN: This equipment was not used for many times.

When the equipment was not in use, there was no inspection. But the responsibility for not selling was with the University.

Madam, Shrimati Sumitra Mahajan asked about scrap. Again, I would like to explain that the scrap which is imported is a different issue. We have to be very careful about the scrap which is imported from outside. We are taking adequate measures. Some are already in place but we are taking adequate measures.

A question was asked: Was there a criminal negligence? Yes, the Police will look into it. Statements were made about wire shape, the scrap imported. It is not true. Initially, we only found four pencils. Initially, we did not know from where it came. But, when the Delhi Police located the source to Delhi University, when the original equipment manufacturer was contacted, I am happy to inform that it was found that every single pencil - about 112 slugs of them – has been identified. They are safely stored with the Narora Atomic Power Plant and there is no danger whatsoever from this incident although what has to happen has happened.

Now, I come to the issue about the life of the equipment. You are right that Cobalt-60 has a long life but that is now under secure location in Narora and nothing will happen from that.

Well, a question was asked whether Cobalt-60 can be used for dirty bomb purpose and all that. I think, whatever we know, whatever the nuclear energy people know, dirty bomb will require a different material. That is precisely why in case of possible import, we are putting in place safety norms.



It is not true that we did not know from where it came; we have no clue. We knew exactly from where it came. There were rules which should have been well in place; they were broken and not adhered to.

Some examples of other countries have been given. Again, I would like to highlight that we have not had any untoward example in India in our nuclear power programme. The auction by the Delhi University was an unfortunate incident. There is a proper inventory of whatever equipment is being used in India....(*Interruptions*)

MADAM SPEAKER: Nothing will go on record except the reply of the hon. Minister.

*(Interruptions) â€¦\**

MADAM SPEAKER: Shri Gurudas Dasgupta, you cannot go on asking questions. You have asked your question. Please take your seat now.

*...(Interruptions)*

SHRI PRITHVIRAJ CHAVAN: I would like to say that we have learnt some lessons....(*Interruptions*)

MADAM SPEAKER: Nothing will go on record except what the hon. Minister is saying.

*(Interruptions) â€¦\**

SHRI PRITHVIRAJ CHAVAN: Let me finish it You can ask questions....(*Interruptions*)

MADAM SPEAKER: Hon. Minister, kindly address the Chair.

SHRI PRITHVIRAJ CHAVAN: Madam, I will just end up by saying that we have learnt some lessons from this whole thing....(*Interruptions*) Let me finish it....(*Interruptions*)

MADAM SPEAKER: He has not completed it.

SHRI PRITHVIRAJ CHAVAN: I am just concluding. We have learnt some lessons. It is reassuring that this incident had nothing to do with our atomic energy programme, power production programme.

Secondly, there was absolutely prompt response from the Disaster Management Authority, the Atomic Energy Department and the AERB. When we got the information that something has happened, immediately, we responded and we contained the problem. All the material has been recovered now. The Delhi Police helped us to trace the source to the DU. The DU did not volunteer and tell us what happened.

There are concerns that there is no compensation. You are right. We will put one in place. There is no insurance regime. If compensation has to be paid for the medical facilities, if somebody declares himself bankrupt, we will have to have insurance like we are planning now in the Civil Liability Regime.

I make one last point. I think we need to strengthen our medical regime because for many days they did not know that it is a radiological accident and what needs to be done. There has to be a de-commissioning process for whatever is imported.

MADAM SPEAKER: Thank you so much.

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