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## Capper Pass Factory (Polonium Emissions)

*HC Deb 10 March 1988 vol 129 cc743-51*

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7.12 am

*Mr. James Cran (Beverley)* I am grateful for this opportunity to address the House this morning. I suppose that I should really call it this evening for, unlike most others in the House, I have had the benefit of a good night's sleep.

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At business questions yesterday I raised the subject of cancer clusters. My constituents and I are worried not only about the substance of the facts but about the manner in which the issue was publicised. It came as a surprise to many people last Friday evening to turn on their TV sets to view Channel 4 and see what many fair-minded people would regard as a sensational programme. The problem with such programmes is that, while they focus the mind, they also worry many people quite unnecessarily.

As a consequence of that programme, I have received many letters from constituents asking whether the matters stated in that programme were correct. That is why I raised the matter in the House yesterday, and I am fortunate to be able to raise it now.

What is the substance of the problem? I have no doubt about the fact, having checked it, that there is a higher than average incidence of cancers among children in a particular part of my constituency, one might say in the direction of the prevailing wind from the factory in question, which is called Capper Pass and is part of the Rio Tinto-Zinc organisation.

Since 1977, there have been eleven cases of cancers in children. That may not seem a lot in relation to the total population of my constituency, or indeed of the area within it that we

are discussing, but when that disease strikes, the effect on the families involved is 100 per cent. When considering the national average of what one would expect in terms of the incidence of cancer, I discovered that for seven types of cancer, the observed rate in my constituency is above, and in some cases considerably above, the United Kingdom average, albeit the actual numbers involved are, I repeat, extremely low.

I wish to get that message across to my constituents so that they do not believe the newspaper reports which talk about "cancer villages". That gives the impression that anybody and everybody is liable to succumb to cancer, and that is not the case because, as I say, the numbers involved are very low. None the less, the disease is distressing when it occurs. That distress is reflected in the letters that I receive from constituents with young families who worry about what may happen during the next few years of their children's lives. That is why I as a Member of Parliament, and the Government, have to take the matter extremely seriously.

I have to pay tribute to my hon. Friend the Under-Secretary of State for the Environment, the Member for Lewisham, East (Mr. Moynihan). Yesterday, I beat him to his Department, today he beat me to the House of Commons, and I must pay tribute to the readiness with which he was prepared to see me. I know that he has had a very busy schedule this week, and I believe that he was in Malta yesterday, but that did not prevent him from seeing me. It will give my constituents confidence to know that the Minister was prepared at very short notice to hear representations from a Member of Parliament, and in this case a very new Member of Parliament.

I also put it on record that my hon. Friend's Department is not the only one with responsibility for this matter. The Department of the Environment is involved in the pollution control and the identification of the pollution, but if there is a medical problem after that, it then becomes the responsibility of the Department of Health and Social Security. Again I should like to place it on record that the responsible Minister there, who I understand is Lord Skelmersdale, will readily meet me to discuss the matter, and I hope to see him early next week.

What is the problem with which we are all faced? As I have said, the company involved is Capper Pass and I must place it on record that it is an extremely responsible company. When I was newly elected, I did not have to ask the company whether I could investigate what it did or whether I could look around that installation. The managing director made sure that, within

a week or two, he had invited me to see his operation because he knows as well as I do that there are environmental considerations arising out of that plant, particularly the smokestack. He went to considerable lengths to show me what is done in the factory to ensure that all types of emissions from the chimney are controlled and monitored.

Immediate action is taken if emission levels are higher than those allowed. An extremely sophisticated control mechanism is operated by that plant to monitor polonium 210 and other emissions, such as lead and arsenic. I stress, however, that the level of all emissions into the atmosphere is below allowed limits, which my hon. Friend the Minister will, I am sure, affirm.

Capper Pass is the biggest tin smelting company in Europe. It discovered in 1984 that one of its by-products was emitting alpha radiation. After very sophisticated laboratory tests, it was found to be polonium 210. The National Radiological Protection Board was quick to lend its aid to the company to analyse the substance.

Polonium is of natural origin. Tin deposits are often to be found in granite rocks and it is not, therefore, surprising that there are emissions of alpha radiation from tin, which then get into the production chain. That is exactly what occurred in this case. However, for this very reason, I must ask why the inspectorate did not take the initiative before 1984 and go to Capper Pass and to similar companies that handle products that might emit radiation to conduct tests in the manner I have just described? Again I stress that the amount of radiation being emitted by the tin did not, in the event, justify such action; it was well below the level that has been permitted since 1984.

The problem having been identified, there was a detailed study of the smelting processes at Capper Pass. Polonium was found to be concentrated in three areas in that factory, which were then classified as "controlled areas". That underlines the action that the company took, when it discovered that there was a problem, to contain and control it. It then proceeded to develop processes to separate the polonium into what I believe is called intermetallic dross, which is then stored until the activity decays. Polonium 210 has a very short half-life, and decays very quickly; the procedure can therefore contain most of it.

Inevitably, in this process small amounts of polonium will find its way in the form of gases, through the cleaning plants, resulting in an emission into the atmosphere by way of Capper Pass's large chimney stack. My constituents see the emissions every day as they go about

their business, and they can be forgiven for thinking that radiation—alpha particles, polonium 210 or whatever we are to call it—is being showered upon them.

To date, I question whether many of the commentators have been very responsible in this regard since I have discovered that the authorisation granted with the licence by the radiochemical inspectorate in 1985–86 was for up to 592 megabecquerels, or 16 millicuries, of polonium per week. Having obtained from the company the list of results of the tests undertaken since then, almost on a weekly basis—in some cases, more often—I discover that the emission of polonium has been well inside the limit authorised in the certificate in 1984–85.

It is extremely important for the record that the House, my constituents and, more particularly, commentators who may be sitting with their pencils ready for the next sensational and censorious headline, note these facts. Looking at a list of the test results since 1985 in a random way, I discover 6 per cent. of the authorised emission, 3 per cent., 4 per cent., 5 per cent. and 2 per cent. In other words, very low levels are being emitted from the chimney. Although the levels are low, however, the House will remember what I said at the beginning of my speech: cancers are none the less occurring around the factory at double the national rate, or more. There is a question to be answered: why does that rate of cancers occur in my constituency?

Prima facie, it appears — if we are to believe the National Radiological Protection Board, the pollution inspectorate and, no doubt, a bevy of other organisations under the aegis of the Department of the Environment — those cancers are not occurring as a result of the small amounts of radiation being emitted from the chimney. I do not know. None the less, there is undoubtedly some form of problem. My aim — I am determined to see that I achieve it—is that we get to the bottom of why that is occurring.

It is important to say that, after and during the time the certificate was being authorised, the company went to great lengths, as I have seen on the ground having visited the factory, to install sophisticated air cleaners, and other pollution control equipment. It has six high-volume air samplers which are positioned around the works, and those are examined weekly. Therefore my constituents should understand that if a problem did occur that equipment would quickly show it.

The letter that accompanied the certificate of authorisation that was sent to the local authorities

—Beverley district council and Humberside county council—said: Low level solid, liquid or gaseous waste within the limits set out in this authorisation may be safely discharged to the environment and no special measures need to be taken by your authority. The local authorities in question have taken their responsibilities extremely seriously, and since the certificate was granted they have considered responsibly the question of emissions. Indeed, the borough of Beverley has a sophisticated programme to check the emission of arsenic and other base metals such as lead.

So far as I can see, all that could possibly have been done seems to have been done in this case. I can only conclude that if these control measures are undertaken at this factory, the constituents of other Members of Parliament can have confidence that it is happening in their constituencies too where such factories are located, and there is no doubt that they occur widely throughout the United Kingdom.

It is also important to put on the record a letter from Her Majesty's inspectorate of pollution, dated 2 March 1988. It says: Reported discharges from the chimney of Copper Pass have been considerably lower, at less than 10 per cent. of the authorised limit, and any consequential radiation exposure has been correspondingly reduced. Radiation exposures as low as these are significantly below the natural background radiation exposure—2mSv per year"—No doubt the Minister will tell me what that means; but the important thing is that radiation coming from that chimney is well below the natural background radiation exposure— and well within recorded regional variations and may therefore be considered to be radiologically insignificant. Those are strong words from careful civil servants, who are not known for being extravagant. That is a strong statement, and I repeat it: the emissions from the chimney can be considered to be radiologically insignificant. I am pleased to read that, and I wish that those who initiated the television programme had taken the opportunity to gain access to the information that I have been able to find so easily. It has been suggested that much information is kept secret and that it is difficult for Members of Parliament and researchers of television programmes to gain access to information, but I have not found that to be the case. The company was only too prepared to open its doors to me and to tell me everything I wanted to know, and the same can be said for the local authorities, the pollution inspectorate and, of course, the Minister.

The figure of 592 megabecquerels per week maximum that could be emitted from the chimney

was not plucked out of the air, but was calculated on the basis of scientific assessment. I would like to know how it was arrived at, and if the Minister, cannot tell me, I shall table the appropriate parliamentary question to elicit the information.

In calculating this limit Her Majesty's pollution inspectorate went to great lengths to take advice from its own experts and from the International Commission on Radiological Protection. That advice was in turn endorsed by the United Kingdom National Radiological Protection Board, and the figure was arrived at after considerable investigation by all responsible bodies, which take their duties very seriously.

Neither I nor the Minister and his officials are complacent about the rate at which the cancers are occurring. We must get to the bottom of the problem. The HMIP should, as I have already said, have been aware that radiation was probably in the tin being smelted, because the tin often comes from granite rocks. We must ask ourselves why that situation was allowed to occur whereby HMIP did not know. The inspectorate must in future take the initiative in cases such as these.

All this having occurred, I have no reason to believe that it will not be followed by other television programmes and statements, and the Government have a responsibility to investigate the matter thoroughly. I hope that the Minister will consider favourably my request that the pollution inspectorate should go into the factory at Capper Pass and make a detailed investigation. I do not know what the HMIP does, but my constituents and I want a thorough "going over", because only that will assuage the feeling of people who, when they look at their children, worry that they are being covered in radiation. When I look at my eight-year-old daughter Alexandra, who is the apple of my eye, I would not want to think that about her. Of course she is not, and nor are my constituents, but that is why the HMIP must conduct a thorough investigation.

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The HMIP conducted a routine investigation in 1986. I believe that under present circumstances, it behoves an organisation such as that to go into sensitive plants at least annually, to establish in the public interest whether the factory is complying with the Certificate of Authorisation.

That point raises another question and I have already tabled a written question to elicit the information in greater detail. What exactly is the mechanism of control for polonium 210 in

this factory and in factories like it? I am led to believe that the company takes samples from the smokestack and from various other parts of the plant. Is that in the public interest? I do not mean to imply that the company is not undertaking the testing in a responsible way. I believe that it is. However, it is not fair on the company or the community around the factory for the company to play a very large part in ultimately monitoring itself. That cannot be right.

In addition, Mr. John Urquhart, whom I understand is a statistician, took part in the television programme to which I have already referred. He made various allegations based on statistical information. Mr. Urquhart did not allow me to see the statistical data, nor did he, as I understand it, allow the local authority to see the data. Therefore, perhaps the Minister will tell me whether he and his officials have seen the data.

I believe that the matter would have been dealt with responsibly if all parties had been given the information in question so that we could raise the issue with the Minister. If I or any organisation had failed to do that, we would have been rightly and roundly condemned. No doubt my electorate would have told me what they thought about that at the next election.

I repeat that I was not told about that statistical information. I deprecate that, in view of some of the very sad letters that I have received from frightened constituents.

There also seems to be "something rotten in the state of Denmark" when a collection of television producers, researchers and the rest can put together a programme like the one that I and others saw, which then has the effect on ordinary people that this programme has had. That aspect will, I believe, need investigation.

After the really important issues have been dealt with, such as the investigation to which I hope that the Minister will tell me he can agree, I will see Lord Skelmersdale to discuss this question: if the problem is not occurring because of polonium being emitted from the chimney, why is it occurring? If it is occurring—as has been suggested because of a random cluster of cancers—it behoves the DHSS and the Government. to tell my constituents why random cancer clusters occur.

I will expect to hear answers on those points from Lord Skelmersdale's officials and his scientific and medical advisers next week. If we do not fully understand why those clusters occur, I will press the Government very hard to devote such resources as are necessary to discover the truth

of the matter. We cannot sit back and say, "It is not coming out of the chimney. That is not causing the problem. The problem is geological or geographical." That is not enough of an answer. I will want very full answers from the Government and I hope that I am about to receive the first tranche of the answers from my hon. Friend the Minister.

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*The Parliamentary Under-Secretary of State for the Environment (Mr. Cohn Moynihan)* My hon. Friend the Member for Beverley (Mr. Cran) has a reputation for being a very hard-working constituency Member, placing his constituents' interests at the top of his priorities. I congratulate him on a comprehensive analysis of an important issue which he has considered in detail.

7.44 am

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My hon. Friend rightly pointed out that he came to see me well before most meetings normally start, in the early hours of yesterday morning. He raised the matter on the Floor of the House yesterday afternoon and wisely spent a good number of the hours of the night preparing for his speech this morning. He gave a first-class exposition of a difficult and highly technical problem, which combines a requirement to understand the scientific background with a requirement to understand the sensitivities of the local electorate, who are obviously worried, especially when scientific expertise is not necessarily widespread. I appreciate the way in which my hon. Friend has brought this subject to the attention of the House.

I shall make in about 10 minutes an initial reply. My hon. Friend has raised a number of important issues which I should like to pursue through other channels. This gives the House an opportunity to hear from the hon. Member for Burnley (Mr. Pike), who has been up many hours preparing and waiting to bring his important subject to the attention of the House. It is right that he should have five minutes before the Adjournment of the House to do so. If my speech is somewhat curtailed, it will be for that reason and because of the hour.

Clearly there is concern over the reported leukaemia clusters among children on Humberside. There is no evidence to suggest that the alleged incidence of leukaemia on Humberside is related to the discharge of polonium from Capper Pass, but local variations in the incidence of disease and the concern that has been expressed by my hon. Friend are sufficient for this matter to be studied in full. For that reason, I understand that the DHSS will receive a report from the

small area health statistics unit at the London School of Hygiene, which is concentrating on this issue. I am sure that my hon. Friend and colleagues in the Department of Health and Social Security will make sure, when he receives the statistics, that a comprehensive report is provided to my hon. Friend the Member for Beverley, but that is, no doubt, a subject to discuss when they meet.

Capper Pass processes metal ores and residues to extract tin, lead, other metals and alloys. Some of those raw materials can contain naturally occurring radionuclides which can become separated due to extraction and processing. The levels of radioactivity in these raw materials are usually such that they fall outside the scope of the [Radioactive Substances Act 1960](#). That is true in the case of Capper Pass where the raw materials generally are not radioactive within the meaning of the Act. In 1984–85, after the discovery of residual activity in bismuth alloy supplied to a German company, Capper Pass undertook, at the instigation of the regulatory bodies, a systematic investigation of the behaviour of polonium-210 in its plant. It was discovered that the extensive and rigorous processing causes polonium-210, which exhibits complex physico-chemical properties, to volatilise at high temperatures and then condense and plate-out on colder plant surfaces. Consequently, over 95 per cent. of the polonium-210 is not discharged; it is retained within the plant while it decays away with a half-life of 138 days to form stable lead. It is assumed that discharges of polonium-210 were occurring before this discovery but, because of its relatively short half-life, no build-up in the environment can have taken place.

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During its inspection programme, HMIP reviews all sites authorised to discharge radioactive wastes. Authorisations are reviewed periodically to determine whether changes are appropriate resulting from changed circumstances, improved technology and scientific advances. It is the intention to complete a further assessment of Capper Pass before the end of this year. However, the inspectorate will also co-operate with any other formally established inquiry. The onus for demonstrating compliance with the requirements of an authorisation granted under the [Radioactive Substances Act 1960](#) rests with the operator. In the case of Capper Pass, samples of stack discharges and samples from environmental monitoring stations are collected by the company. Stack samples are analysed by the company and environmental samples by the National Radiological Protection board. Stack samples are taken and analysed weekly and a request for the results should be made to the company. HMIP carries out independent analysis of spot samples as a check on the operator returns.

My hon. Friend rightly pointed out that statistical data on the incidence of disease are for consideration by the Department of Health and Social Security, which is supporting the study by the small area health statistics unit at the London School of Hygiene, to which I referred. An independent assessment carried out by the NRPB concluded that any radiation exposure from discharges at the permitted level would be insignificant at about 0.02 microSieverts per year. Radiation levels as low as that are well below the natural background radiation exposure of between 1,000 and 2,000 microSieverts per year, and well within recorded regional variations.

Advice on the criteria for setting limits of exposure for the public are published by the International Commission on Radiological Protection in its report No. 26 dated 1977 and by NRPB in its report GS9 dated 1987. I shall obtain details of those reports and make them available to my hon. Friend.

The provision of the information is extremely important in alleviating local worries and concerns. I echo my hon. Friend's point about the retention of information for use for public consumption. If information is necessary to allay public fears, it is very wrong that it should not be made available as comprehensively as possible. On that point, I shall ensure that we provide my hon. Friend with as much help and information as he needs on the detailed points that he has brought to the attention of the House.

Average emissions of polonium-210 have been well below the authorised limit. Some fluctuation occurs from one week to another and depends on throughput, among other factors. Authorised limits are set to take these factors into account. Control over the use of radioactive substances and disposal of radioactive wastes is a central Government responsibility. There is a requirement under the [Radioactive Substances Act](#) for HMIP to consult and inform local public bodies of such uses and disposals. In the case of Capper Pass, copies of the authorisation certificate were sent out in accordance with normal procedures to Humberside county council and Beverley borough council in October 1985. The authorisation was discussed at a meeting of the north Humber bank pollution liaison committee during October 1985, prior to its coming into force.

Section 13 of the [Radioactive Substances Act](#) prevents the disclosure by HMIP of information about the use of radioactive materials in the course of a commercial activity except when the permission of the user has been granted. We must pay due attention to that, as it is

the expressed will of Parliament. Monitoring of the environmental behaviour of polonium-210 can be a difficult and costly exercise, as my hon. Friend knows. However, I emphasise that, if local authorities wish to undertake it, HMIP will be pleased to give advice and assistance where appropriate. In view of the concern expressed by my hon. Friend, I am willing to go further than that in asking HMIP to provide a comprehensive report on the subject and to ensure that all the points that he has drawn to my attention are adequately answered, and I ask my hon. Friend to come back to me if he has any specific anxieties. He has vigorously pursued this matter on behalf of his constituents and it is absolutely right that the Government should respond comprehensively and with equal vigour to his questions.

That is a brief resumé of the position. I have made a background-setting speech with due consideration given to a number of the specific questions brought to the attention of the House, but I emphasise that I regard this as a first step in helping my hon Friend. We shall of course answer the additional points that he brings to our attention in another form—whether at Question Time or by letter. I shall make sure that all the necessary resources are put behind giving him the opportunity to continue to serve his constituents with the vigour, ability, knowhow, and desire for detail that he has shown on this issue to date.

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