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AIC STATEMENT

ADVISORY COMMITTEE ON ASBESTOS - FINAL REPORT

The Advisory Committee in its report recognises that the properties found in asbestos have an important role in fire protection, automotive, construction and other industries. The report moreover emphasises that the general public is not at risk through the proper use of asbestos containing products.

We agree with most of the recommendations which will provide improved protection to workers.

The report emphasises that the Asbestos Regulations 1969 brought about a significant improvement across the whole range of the asbestos industry, reinforced by considerable additional work initiated by industry itself. As a result, most of our asbestos using processes are at or below the 1 fibre/ml control limit. But remaining areas do present problems. No tighter control limits exist anywhere in the world.

The industry will contest actively the following issues:-

1. The special control limit of 0.5 f/ml, because in our experience it is not possible to produce a consistent control at that level.
2. The pressures placed upon users and specifiers to seek alternatives, as we believe that premature and hasty decisions on substitution could lead to problems and consequences as critical as those associated with asbestos itself. As the report notes, in the criteria for the use of alternatives it is essential to take account of health risks, suitability of product performance and costs associated with the change.
3. The proposed implementation date of 1 December 1980. Sufficient time must be allowed to assess the implications of the recommendations, to allow industry, where necessary, to adapt to the new conditions, and to protect jobs.

PLAINTIFF'S
EXHIBIT

JM-2103

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AIC PRESS CONFERENCE

CHAIRMAN'S INTRODUCTORY REMARKS

Good morning, ladies and gentlemen. May I thank you for coming and giving up your time. I appreciate that you have already been to the HSE Conference this morning, and that you are aware of the main aspects of the Advisory Committee's Report and recommendations. I will not dwell at any length on these in detail, nor will I go through our statement which you will find in your Press kits.

Let me introduce myself and my colleagues. I am Charles Fenton, Chairman of the Asbestos Information Centre, previously the Asbestos Information Committee, a body set up 12 years ago to represent the asbestos industry in this country and funded by its many members. I am also Managing Director of the OSA Group.

On my left is Harry Hardie, a Director of Turner & Newall, a Member of the AIC Executive Committee and the CBI nominated representative on the Advisory Committee.

On his left is Wilfred Penney, Director General of the Centre, who acts as spokesman for the asbestos industry, and who has some 24 years experience in it.

On my right is Dr. Richard Gaze, a Director of Cape Industries, Chairman of the Executive Committee of the Asbestos International Association and Member of the AIC Executive Committee.

On his left, Etienne van der Rest, Chairman of Fiberglast Building Products, a Member of the Executive Committee of the AIC, and also Chairman of the Asbestos International Association.

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Also present in the front row and distinguished by their badges are Bob Day, spokesman for the Asbestos Cement Manufacturers Association, and Deputy Chairman of FAC Construction Materials Ltd., and Dr. Walter Smither, Medical Advisor to the AIC.

Other AIC members are on hand for you to meet after these proceedings and they are all clearly identified.

The basic objective of the ACA report obviously, was the protection of people in the workplace and in the environment, and we welcome the recommendations that lead to that better protection. We welcome the assurance there is no quantitative evidence of a risk to the general public.

Turning to the proposed control limit. The report refers to the generally accepted concept that, for known carcinogens, there is no safe level; but that there is a control limit below which there is no significant increase in mortality. We all believe the 1 fibre control limit will achieve its objective.

A 1 fibre/ml standard is a tight standard and it will demand a great deal of effort from industry to achieve it on a consistent basis. Remember, we are not talking about a target, or what Bill Simpson once described as a "paper illusion". It is a control limit; we have to meet it. We believe any call to reduce it still further would require effort out of all proportion to the reduction in risk of contracting asbestos-related diseases.

It follows we consider the proposed 0.5 fibre control limit for Asosite is unworkable. It is worth mentioning in this context that the present draft of framework directives within the EEC is based on a phased programme to achieve a 1 fibre standard by January 1984.

We also find the time-table for implementation to be unrealistic. Our industry has achieved a great deal during the period the Advisory Committee has been deliberating.

We have spent a great deal of time, money and resources for planned improvement in engineering controls - in enclosure, exhaust ventilation, fibre treatment, dust suppression of products, regular dust monitoring, with improved measurement and analysis. There have been extensive education programmes on identification of risks, precautions to be taken, and to motivate management and those exposed, to understand their responsibilities and the need for control.

There are still some remaining problem areas for which the technology for improving dust levels needs to be verified, following which it would not be possible to implement the engineering work within the space of twelve months.

I do not want to say too much about the cost of implementing the Committee's recommendations. But we are in a price-sensitive market. There is competition from other countries where they are operating under less stringent regulations.

On substitution, the Advisory Committee rightly recognises this is an area in which one should proceed with caution.

We are asked to weigh the relative advantages of asbestos and potential substitutes, taking into account current knowledge of potential health risks, suitability - production and performance of finished product and costs.

We are confident that, when all these aspects are fully considered, the unique properties of asbestos will continue to provide benefit to the community. The small exhibition of products at the back of the room shows some of the more important uses. Probably some 5,000 products contain asbestos, reaching over a wide range of industries, such as construction, automotive, chemical, engineering, etc.

Recommendation

15. We recommend that the control limit for exposure to dust from chrysotile asbestos should with legal backing become 1 fibre/ml by 1 December 1980, subject to recommendations 10 and 13 above. (Para 181)

Remarks

We do not intend to argue against the proposal for the 1 fibre standard but must concern ourselves with the time span for implementation which is too limited at 1 December 1980 for some specific areas and products. There is understood to be a tacit acceptance of the 1 fibre control by the Union representatives of the ACA.

The introduction of new techniques of sampling and measurement (such as Magiscan), the standardisation of techniques (Central Reference Laboratory) will produce an improved performance and tighter counting which allied to the tighter control will add to the difficulties of attaining such control limits.

Problem areas must be clearly identified by industry, areas such as textile, millboard or friction material. Harmonisation with FEC control is of paramount importance.

16. We recommend that the Health and Safety Executive should examine with the employers and workers concerned those particular processes where there appear to be difficulties in meeting the timetable recommended for the application of the control limit for exposure to dust from chrysotile asbestos. (Para 183)

Industry in identification of specific problem areas must seek employee union participation in assessment of the degree of problems, estimated cost of resolution of the problems, and time span to engineer the work; and reach agreement on the difficulties of meeting the proposed timetable.

Recommendation

- 17.. We recommend that the control limit for exposure to dust from amosite asbestos should, with legal backing, become 0.5 fibres/ml by 1 December 1980, subject to recommendations 10 and 13 above. (Para 185)

Remarks

This recommendation must be opposed as strongly as possible on the grounds of an industry inability to meet a 0.5 f/ml standard and therefore the manufacturing process cannot continue. It is possible to measure at 0.5 f/ml but it is not possible to control. Medical evidence is insufficient to support this recommendation and appears to be based solely on the Pattinson New Jersey experience. The HSE have initiated further research through Southampton University and the issue should not be prejudged until evidence is stronger.

A 0.5 f/ml standard is not practicable for any fibre asbestos, glass, or mineral.

- 18.. We recommend that the Health and Safety Executive should examine with the employers and workers concerned those particular processes where there appear to be difficulties in meeting the timetable recommended for the application of the control limit for exposure to dust from amosite asbestos. (Para 186)

See comment under (16).

Recommendation

We recommend that the Health and Safety Commission should refer to the Advisory Committee on Toxic Substances, invite it to monitor and evaluate the results of the research we have proposed, and to review the recommended control limits as further information becomes available. (Para 193)

We recommend that the Government should press for similar standards of control for asbestos with other countries, particularly within F.E.C., and through international organisations such as the ILO and WHO, along the lines we have recommended. (Para 194).

We recommend that there should be an obligation on an employer to arrange for dust estimations to be carried out at such places and at such intervals as are necessary for the purpose of - a) ascertaining the effectiveness of his method of restricting the exposure to employees to asbestos dust and - b) testing the efficiency of engineering methods for the control of dust, especially exhaust ventilation equipment. (Para 196)

Remarks

This recommendation introduces another element of uncertainty that must affect investment planning. There is a need for stability to encourage confidence, investment, research and development.

This recommendation is accepted.

We are concerned at the implication of this recommendation as it may place an intolerable burden on the smaller user, such as the building site, and could prove a further pressure for unnecessary substitution whilst there may be some difficulty in finding a form of words to cover the hazardous operation, a clearer definition must be obtained if this recommendation is to be of practical use. Codes of practice or Technical Data Note may be a more effective method.

Recommendation

Remarks

23. We recommend that, in view of the importance of maintaining and servicing ventilation equipment to a high state of efficiency, people who examine and test it should be trained to a specified standard. (Para 201)

Accepted.

24. We recommend that the requirement to provide protective clothing and respiratory protective equipment should be explicitly stated in regulations and extended to include any workers whose person or personal clothing is liable to be significantly contaminated with asbestos dust. (Para 202)

This recommendation is accepted in principle but more precise definition is required than "significantly contaminated". Significant should have some relationship to the standard of control. Provision of protective clothing is of general concern, not specific to asbestos - work people should change from normal clothing as a move to improved housekeeping.

25. We recommend that suitable changing and washing facilities should be provided at all places where protective clothing is required. (Para 202b)

Accepted.

26. We recommend that there should be an explicit prohibition on the cleaning in workers' homes of the protective clothing required to be issued for work with asbestos. (Para 202)

Accepted.

Recommendation

Remarks

26. We recommend that, so far as is reasonably practicable, areas or workplaces where dust concentration does or is likely to exceed the control limit should be suitably marked and a scheme for restricting access to them instituted. (Para 204)
- Accepted. The recommendation is seen to refer in the main to demolition and lagging work, but may include some areas in textiles, such as filter galleries.
27. We recommend that all people whose work is likely to expose them regularly to asbestos dust should be advised to refrain from smoking. (Para 205a)
- Agreed in principle but difficulty in enforcement. Experiments are being carried out, but Union attitudes have a significant part to play in the education of the workforce.
28. We recommend that the two existing schemes of medical supervision should be replaced by a single one with the features listed in para. 206. (Para 207)
- E.M.A.S. and PNF should be merged to form one organisation.
29. We recommend that a regulation should be made under the Health and Safety at Work etc. Act requiring employers to co-operate in the EMAS survey by informing EMAS of anyone currently in or entering employment where precautionary measures have to be taken to comply with the Asbestos Regulations and provide facilities for him to be medically examined. (Para 209).
- No comment - accepted.

Recommendations

Remarks

30. We recommend that, if recommendation 29 is implemented, the requirement for initial and periodic medical examination of asbestos workers under the Social Security (Industrial Injuries) (Prescribed Diseases) Regulations 1975 should be repealed. (Para. 211)

The present requirements are initial examination within 3 months of engagement, and periodic examination every 2 years. There is a need to protect workers from over exposure to X-Rays.

31. We recommend that the EMAS should have to authorise doctors other than their own staff to conduct the medical supervision of asbestos workers, subject to suitable training and guidance. (Para 212)

Accepted. E.M.A.S. have a limited resource and are not able to deal with the present volume of work.

32. We recommend that the dust concentration in the air emitted from workplaces should be subject to more specific control and that special attention should be given to the possibility of scheduling a class of asbestos works under appropriate legislation. (Para 215)

No comment. Recommend no initiative from industry as it already contributes technological know-how.

33. We recommend that if recommendation 32 is implemented, designated and especially scheduled employers whose premises emit asbestos dust into the atmosphere should measure such emissions regularly and systematically and keep records of the amount emitted. (Para 216a)

Recommendations

Remarks

34. We recommend that when the Government's monitoring programme on asbestos in the general atmosphere is complete, the data be assessed by the appropriate public bodies in the light of the medical evidence to determine whether any general limit on asbestos concentration in non-occupational environment is needed. (Para 217)

No comment

35. We recommend that a new legal obligation should be introduced so that by 1 December 1980 no raw asbestos may be imported into the U.K. unless it is shipped in totally enclosed metal-clad non-ventilated ISO general purpose freight containers. (Para 220)

Accepted. This recommendation would have implication for importers of Russian and Cyprus fibres. The AFIR should be consulted.

36. We recommend that raw asbestos fibres and other loads liable to give rise to asbestos dust should be transported only in enclosed receptacles. (Para 221)

This recommendation should delete reference to "other loads" or be more clearly defined.

Recommendations

Remarks

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| <p>37. We recommend that waste disposal authorities should have powers (similar to those under Section 16 of the Control of Pollution Act 1974) to identify a disused tip where asbestos is thought to be a hazard, to carry out the necessary works to render it safe and to recoup the expense from the occupier or depositor wherever possible. (Para 223)</p> | <p>This recommendation gives rise to some concern on the unlimited authority to take action and recoup expense.</p> |
| <p>38. We recommend that if experience shows that voluntary compliance with the present labelling scheme for consumer products containing asbestos is inadequate, it should be made obligatory by appropriate regulations. (Para 228)</p> | <p>No comment.</p> |
| <p>39. We recommend that there should be a regular review of information concerning risks to health from the contamination of food and drink by asbestos. (Para 230a)</p> | <p>No comment.</p> |
| <p>40. We recommend that all the existing legislations, regulations, codes of practice and guidance notes relating to asbestos should be brought together in one publication. (Para 231)</p> | <p>This will involve Government regulation, etc. and not industry codes or leaflets.</p> |
| <p>41. We recommend that relevant legislation should be examined with a view to reducing the statutory limitations on the disclosure of information relating to asbestos. (Para 232)</p> | <p>This is taken to refer to "Open" Government and the release of information generally.</p> |

SOME POSSIBLE PRESS QUESTIONS (AND ANSWERS)

QUESTION

You have always maintained to your employees and to the public at large, that the 2 f/m standard is safe. What is your reaction now that the Government are recommending halving that for chrysotile, and quartering it for amosite?

ANSWER

1. The changes have been the acceptance by medical and scientific opinion formerly that in dealing with any known carcinogen there is no safe level, there is however a control limit below which there is no significant increase in mortality.
Secondly, the revised information from the Peto Study using his straight linear concept assumption produced a change from the 100 man fibre years to 57 man fibre years, i.e. 57 years at 1 fibre or 28½ years at 2 fibres. There is still support for the 2 fibre standard, particularly from other countries; whereas in the UK there has been acceptance by the industry to set its targets as the lowest reasonably practicable.

2. The difficulty in dealing with asbestos is that people still regard it as a single product, whereas in reality we are dealing with a whole range of differing products, and at least six or seven different markets.

We don't know what the overall cost will be, we need to study the implications of the report - we don't want to underestimate the stringency of the proposed control levels nor to over exaggerate the cost in terms of investment or job loss. In some sectors, such as sealing materials and joints, the costs will be low, for others such as textiles, the costs could be high.

We believe we can protect both our markets and the job security if we are given a reasonable time (in some areas 3 years) to adapt to the new conditions.

What overall cost will the industry be involved in by the new recommendations, if they were to become law, as they now stand, and what effect would this have on employment?

QUESTION

You are pressing for time - surely at the old standard will this not result in yet more injury and disease?

ANSWER

3. We believe that there will be a significant decrease in the incidence of asbestos related disease at the 2 fibre standard; but more important that the efforts of industry in a commitment to reaching the lowest reasonably practicable level has in the last few years seen conditions in most of the operating areas at levels below the 1 fibre level. Our preoccupation is in seeking to make further progress in the remaining difficult areas. Progress hampered not so much by cost as by design, engineering and technical know-how. Present incidence is related to past heavy exposure, in some cases such as spray, insulation, and shipbuilding with no control until the 1969 Regulation.

You say that in general, you welcome the report. Could you itemise those areas of it in which you are in disagreement?

4. The areas of disagreement fall under three headings:
- i) control as opposed to prohibition and controls that are capable of achievement, i.e. we cannot produce consistent controls at levels less than 1 f/m³ for some processes
 - ii) time - the proposed implementation date of December 1980 gives too little time to deal with the difficult areas.
 - iii) Substitution should not appear to be mandatory and place unnecessary pressure on the purchaser, if he is capable of work within the control regulations.

QUESTION

5. If, as I understand, most of your processes are already below 1 f/ml, why should you ask for 3-4 years to bring perhaps the remaining 10% into line?

ANSWER

5. The technology for improving dust levels on certain processes has yet to be verified, and even given that such technology was fully proved and available, it would require a further twelve months to implement the engineer's work.

There is another consideration - what will be the trends towards alternatives in the first years after new regulations are published - what will be the effects upon demand levels - and arising from any change, the scale of plant modification required. Without adequate time to adapt to such circumstances the right commercial decision might be to close the manufacture operation in the UK, and import the finished product.

6. (BLUE) - You have not imported or worked on blue asbestos in the UK since 1970. Why do you now oppose an official ban, when you initiated a voluntary one, and when the current legislation has made its prod. manufacture unworkable at 0.27

6. Crocidolite fibre is not used in the UK nor is there any intention to return to its use. We are in favour of the concept of control rather than total prohibition as allowing some flexibility should conditions or requirements for a strategic material change.

QUESTION

9. (SUMST) - Many companies in your industry have already put considerable investment into alternative materials. When do you see asbestos being phased out of most of its applications?

ANSWER

7. The development of alternative materials has been part of the industry's strategic planning for some time; concentration has been made on the product areas where risks from heavy exposure with difficulties in control were seen to be high.

The research into alternatives has had the effect of highlighting the good qualities of the asbestos fibre and its benefits in technical performance and cost. Balancing the known hazard against the unknown, and answering the eternal question of how safe is "safe" is part of a difficult equation.

At this time we do not see asbestos being phased out of most of its applications, we believe that there will be a period of adjustment when new techniques and new products will compete and be tried against the criteria mentioned in the report - technical performance, cost, and associated hazard - that purchase decision assessed against all these factors will still demand an asbestos based product.

The market consists of a number of actual and potential buyers with needs to be satisfied - without over-simplification the question now to be asked is "what can be sold and how can it be made".

QUESTION

8. Could you tell us something about your current practices in the area of compensation?

ANSWER

8. In the UK, an employee who is injured in the course of his employment, or who suffers from an occupational disease is entitled to no fault compensation payments from the Industrial Injuries Scheme administered by the DSS. Benefits under this scheme are not dependent upon contributions made and are paid to those unable to work or disabled as a result of an accident arising out of the course of employment, or because of a prescribed disease related to the nature of such employment. Where death results, benefits are paid to dependants.

Individual claims may be made against the employers.

The Pneumoconiosis Workers Compensation Bill has helped to deal with those people for whom there was no relevant employer available to be sued for damage. Now lump sum payments are available.

QUESTION

1. The links between asbestos and smoking are well documented. Do you enforce no smoking in your plants, or even make it a condition of employment?

2. Could we dwell for a moment on asbestos in water and beverages? What is the current picture in terms of research and conclusions?

ANSWER

11. It would be easy to say that we do enforce non smoking in some of our plants but this would be misleading; the enforcement is related to explosion and fire risk with certain processes involving other hazardous materials.

We do warn on the added risks for asbestos workers who are cigarette smokers; we do not forbid. You may be aware that a positive step in this direction by Johns Manville in the States led to litigation in the courts promoted by the Unions on the basis of infringement of human rights.

12. The report makes reference to ingestion. "There is however no evidence of the risk in animals associated with the ingestion of asbestos and indeed some evidence that there is no risk".

The Water Research Centre have produced a technical report in January 1979 - TR100 - Asbestos in Drinking Water - a most comprehensive review.

A pilot study had been done on asbestos levels in water in the UK. The report concludes "At this stage there is no firm evidence from any studies that directly ingested asbestos gives rise to a detectable effect in man", and calls for further research work.

QUESTION:

9. What steps, during the three years since the ACA has been sitting, have you taken to reduce dust levels, and as an industry what has this so far cost?
10. You say that barring prohibition, the proposed standard is the tightest in the world. Surely Sweden is already operating at 1 f/ml, and gradually working towards prohibition?

ANSWER

9. It is not possible to give you a total cost figure and any attempt would have to be a best guess, and only provide an idea of magnitude of cost. It is certainly in millions and £20,000,000 would not be an exaggeration.
10. We said that no tighter controls exist anywhere in the world. There are pressures in Sweden for the total prohibition of asbestos; their present standard is 1 f/ml and they have no sizeable manufacturing capacity.
- The steps taken fall under various headings:
- 1) Physical control - reducing the contact between man and the fibres which includes:
 - (a) Engineering measures - enclosure - exhaust ventilation - isolation - plant design - fibre treatment - dust suppression - regular dust monitoring. Improved measurement and analysis.
 - (b) Substitution
 - (c) Administration - limiting numbers exposed, limiting duration of exposure, restricting smoking & eating in workplaces, smoking cessation programmes - encouragement of good work practices, housekeeping and the use of personal protection equipment, control of emission to the general environment, control of waste disposal.
 - 2) Medical surveillance - medical examinations, medical records, x-rays.
 - 3) Education - identification of the risks and the precautions to be taken, education of managers, supervisors, shop stewards, safety committees, and the workforce - to motivate the exposed to understand the responsibilities and make for controls.

QUESTION

8. A book recently published draws attention to the fact you spent £500,000 on a promotional campaign. If this is true, couldn't the money have been better spent on research into prevention and possibly cure of asbestos related diseases?

On a technical point, why is there such a wide divergence in the findings between yourselves and other bodies over dust counting measurements?

ANSWER

13. We shall always be under attack that monies spent on sales promotion are too much, monies spent on research are too little. The same book spends pages castigating eminent medical men and scientists for having accepted and then allegedly been influenced by the monies willingly given by industry to further independent research. The budget at any time for the Asbestosis Research Council in no way reflects the expenditure on and financing of research into prevention and cure of asbestos related disease.

Even Professor Irvin Selikoff on page 92 of the book suffers inferred criticism for accepting £250,000 from the asbestos industry. It does appear that we cannot win.

14. This is a technical point and it would be wrong to try to provide too simple an answer to a complex problem. The ACA in June last year issued a second report entitled Asbestos Measurement and Monitoring of asbestos in Air. It is an excellent report and the working group J, who prepared the report, are experts. It deals with the limitations and inaccuracies of different methods. Differences do arise from human errors or limitations in achieving consistent size gradation discrimination between particles, background contamination, etc. You will be aware that a Central Reference Laboratory has been established to study the problem and to seek for more consistent results.

QUESTION

5. What forecast have you made of market contraction once these recommendations become law, taking into account inevitable price rises from new equipment, and the restrictions such legislation will put on your customers?

ANSWER

15. The question has to be asked, but an immediate answer is difficult. We are now looking at the recommendations, we have a consultation period, and then the final answer in terms of what will be the basis for the regulations and when will they be implemented.

We have already made a market forecast in relation to the withdrawal from certain product areas and the contraction is shown in fibre usage figures as follows:-

1972	172,500
1976	143,300
1978	125,723

In 1972/76 change reflects the withdrawal of certain products. 1978 is influenced by contraction in markets reflecting economic depression in both construction and textile markets.

A present view is that the market in the UK will decline over the next 3/4 years to about 70% of its present level.

6. Recent press coverage suggests that penalties for infringement are ridiculously low. What is your attitude?

16. The industry attitudes were spelled out at the Open Meeting of the Advisory Committee on Asbestos held on the 27-29 June 1977.

All responsible manufacturers take the view that those who fail to comply, whether through negligence or deliberately, should be punished. The courts already have very considerable powers.

A dis-service is done to the industry as well as to the people when improper practices are permitted; irresponsible employers or employees will get no sympathy from the industry and should act from the courts.

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17. The report has critics claim that the general public are not in the position of knowing of the standards of the industry.

QUESTION

Should the lowering of the hygiene standard to 1 fibre/ml mean that the general public are being exposed to levels now deemed harmful by asbestos products already present in their homes?

What is the industry's response to the book recently published by the NSSRS called "Asbestos Killer Dust".

ANSWER

17. The report has emphasised that the general public are not at risk. The lowering of the standard impacts on the occupational and para-occupation (manufacturing, processing, etc) with more stringent demand for control. Domestic usage are sources of low emission, published dust counts for example show:

Portable hair dryer	new	0.04
	after use	0.01
Gas cooker seal	new	0.02
	4 yrs use	0.08

Although publicity on instances of asbestos related disease due to such exposure attract attention, they are extremely rare.

18. The book has some good points where it tries to describe the risks and the precautions to be taken without some political overtones; unfortunately the views expressed are extreme in view and language.

So far as we can see it makes no contribution in the provision of new evidence or information that helps towards the education and motivation of worker and public, other than to demand total prohibition. The 500,000 figure for deaths from asbestos related disease between 1978-2018 (30 years) has no firm basis and appears to be a calculated exaggeration designed to frighten people.

SUMMARY OF MAIN FEATURES OF ASBESTOS/CHALCOTITE REGULATIONS

Country	Regulations	Permissible Concentration	Remarks
Australia	March 1979 Regulations determined by each State are based on model Asbestos regulations prepared and recommended by the National Health and Medical Research Council of Australia	2 f/m³ - all types	Use of crocidolite severely restricted in all States. Special approval for its use is required. Application of asbestos by spraying requires special permission in all States. In all States a medical examination including a chest x-ray has to be (compulsory) provided for each employee within 90 days of commencement of employment and thereafter at intervals of 3 years. In the State of Victoria only (at this stage) employees must refrain from smoking at work.
Canada	July 1977	1 f/m³ - all types	Asbestos insulation and spray is prohibited
USA	May's Decree of 12.76 Effective 2.2.79	2 f/m³ - all types except: 0.2 f/m³ Crocidolite over 4 hour period. Temporary higher concentrations allowed but average over 10 minute period not to exceed 12 f/m³.	Loose fibre may not be used on site for the following: In air filtering equipment. Spray and paints. Thermal and Acoustic insulation. Floor and Wall coverings. Decorations. Crocidolite can only be used in: Asbestos Cement pipes. Joints and Packings. Expansion joints in Textiles. Moulding powders. Authorisation must be obtained from Ministry of Labour and Employment for all types of free asbestos fibres, yarn, cloth, millboard etc. Finished products, where asbestos is locked in (such as asbestos cement, vinyl tiles etc) are allowed under the regulations.

	Special regulations for mining.	Different standards in each Province varying from: 2 f/ml to 5 f/ml	
BRITAIN	2nd Meeting Working Environmental Council Asbestos Committee on 7.11.78	2 f/ml - all types Tightening up of all rules likely to reduce TLV to 1 f/ml.	Use of asbestos in spray, thermal, noise or moisture insulation is prohibited. Additional limitations include use of crocidolite subject to exemption or at least a TLV of 1/10th of chrysotile.
IRELAND	July 1977	2 f/ml - all types	Spray is prohibited. Use of Crocidolite is subject to exemption by Labour Protection Board. With effect from 31 May '79 Asbestos waste and products that can cause cancer must be labelled, a/c products are excluded.
FRANCE	Decree No. 77-949 17.8.77	2 f/ml - all types	Decree 3492 1.7.77 Spraying of Asbestos-base finishings in dwellings is prohibited.
GERMANY	January '79	2 f/ml - all types For existing plants 1 f/ml effective July '82. For new plants 1 f/ml effective April '79.	None.
NETHERLANDS	1972 1975	2 f/ml - Chrysotile, Asbestos 0.2 f/ml - Crocidolite Amendment to widen scope to include all situations in addition to manufacture.	No prohibition. Special requirements exist when Crocidolite is involved, i.e. marking of containers, notification to inspectors.
ITALY	National Conflict for a/c workers only.	5 f/ml - for all types. 31.1.79 - Ministry of Labour Commission likely to impose 2 f/ml all types.	31.1.79 Should Crocidolite exceed 0.2 f/ml in ambient air the use of masks will be imposed. Some Trade unions/employers have requested a shift to TWA 1.2-47.

COUNTRY	REGULATION	STANDARD CONCENTRATION	REMARKS
JAPAN	May 1976	2 f/ml all types except 0.2 f/ml Crocidolite.	1976 Any product containing 3% or more than 5% asbestos content must have warning label attached to it.
NETHERLANDS	Asbestos Decree dated 1.4.77 1.7.78 1.10.78	2 f/ml except Crocidolite Crocidolite and Spraying prohibited.	Exemptions from Crocidolite prohibition can be obtained for economical or technical reasons. Mo date fixed for prohibition of asbestos based: - thermal insul. - acoustic insul. - preserving purposes - decorative purposes Exemptions applied for before 1.10.78 given automatic 6 months exemption, after 1.10.78 automatic 3 months exemption, both automatically renewed, as long as Advisory Committee on asbestos does not decide against it.
NEW ZEALAND	Effective 1 May 1979	2 f/ml - TWA - all types	Use of crocidolite restricted: special approval needed. There is a requirement for medical surveillance.
NEW ZEALAND	April 1977	2 f/ml - all except Crocidolite	Spray; electrical, acoustic, condensation insulation, are prohibited. Crocidolite is also prohibited but exemptions can be applied for.
NEW ZEALAND	Act No. 45/65 Act No. 78/73	Prevention of atmospheric pollution, controls work practices in factories and trading establishments. Occupational diseases Act, controls work practices in mines and works.	M. 214's are prescribed but progressive voluntary schemes have been agreed with industry, the Chief Air Pollution Control officer and the Government Mining Engineer.

ended 6.7.79

REMARKS

STANDARD CONCENTRATION

REGULATIONS

DATE	REGULATIONS	STANDARD CONCENTRATION	REMARKS
1.7.76		"Servicio Social" preparing regulations based on OSA standards. In meantime A/C Industry applying OZ standards on voluntary basis.	
1.7.76		1 f/ml all types except Crocidolite.	Crocidolite is prohibited except where ex- emption obtained. 12.1.79 Workers Safety representatives can demand protective clothing used is made from non-asbestos c: and it may well become official directive. 12/78 Have to declare asbestos a "Toxic".
1.7.76		0.1 mg/m ³ - all types 3 20 f/ml	None.
1969		2 f/ml - all types except Crocidolite. When measurements are averaged over a 4 hour period. Short term exposure should not exceed 12 f/ml when measured over any 10 minute period.	Voluntary ban on use of Crocidolite. Voluntary labelling scheme. ACA report due 1979 which may recommend further protection and lowering of T.M.
1.7.76	OSHA (Occupational Safety and Health Administration)	2 f/ml - all types (November '77 OSHA conducting feasibility study aimed at reducing levels to 0.5 f/ml.)	Spray is prohibited in some States. Other regulations issued by: EPA - Environmental Protection Agency. FDA - Food and Drug Administration. MSHA - Mine Safety and Health Administration. CPSC - Consumer Product Safety Commission DOT - Department of Transport.

Index of Abbreviations

1. f/ml - Fibres per Millilitre.
2. T.M - Time Weighted Average.
3. T.V - Threshold Limit Value.
4. A/C - Asbestos Cement.
5. ACA - Advisory Committee on Asbe
6. mg/m³ - Milligrams per cubic metre

15 March 1979