

WORKING GROUP ON ACTION TO CONTROL CHEMICALS

WATCH/MIN/2007/2

Meeting date: 19th June 2007**Open Gov. Status:** Fully open**Type of paper:** Final**Paper File ref:****Exemptions:****WORKING GROUP ON ACTION TO CONTROL CHEMICALS**

Minutes of the 10th meeting of the Working Group on Action to Control Chemicals held on 19th June 2007 in the Committee Room, Town Hall, Bootle

Members Present

Steve Fairhurst (Chair)
Steve Bailey
Robin Chapman
David Farrar
Rosemarie Hutchinson
Len Levy
Steve Williams
Steve Binks
Martie van Tongeren
Ching Aw

Apologies

Alastair Hay
Tony Fletcher

Officials Present

Nicola Gregg (Secretariat)
Hayley Keating (Secretariat)
Anna Rowbotham (Secretariat)
Andrew Darnton
Damien McElvenny
John Cocker
Rob Turner
Mike Wright
Gareth Evans
Brian Crook
Ian Gardner
Roger Brentnall
Kevin Walkin
Dil Sen
Elanor Ball

1	Introductions and apologies
1.1	The Chairman welcomed everybody to the 10 th meeting of the committee.
1.2	Apologies were received from Alastair Hay and Tony Fletcher
2	Administrative issues
2.1	The Chairman asked for any declarations of interest related to the items on the agenda. David Farrar declared interests in low-level asbestos exposure (item 2) and in metal working fluids (item 3). Steve Williams also declared an interest in metal working fluids.
2.2	WATCH secretary Dr Nicola Gregg reminded WATCH members to send in their 07/08 declarations.
2.3	Membership The Chairman informed WATCH that this was the first meeting of a new three-year membership cycle. He thanked all those WATCH members who had agreed to serve on the committee for another membership cycle. He welcomed two new members to WATCH : Dr Martie van Tongeren who had been nominated by the TUC to replace Mark Nieuwenhuijsen, and Prof Ching Aw who had been invited by HSE to replace Ted Smith.
2.4	Adoption of agenda WATCH members agreed to adopt the proposed agenda (WATCH/Agenda/2007/2).

3	Minutes of 9th meeting
3.1	Members had commented by correspondence on the draft minutes of the 9 th meeting. As a result a few small changes had been made in the proposed final version presented here (WATCH/Min/2007/1). Members agreed the finalised minutes.
3.2	Matters arising/Secretary's report The Secretary summarised the actions that arose at the 9 th meeting of February 2007 and provided an update on the progress that had been made.
4	Assessing the Risks Arising from Low Level Exposure to Asbestos : Planning for November WATCH meeting
4.1	The Chairman introduced this item by reminding WATCH that the topic of low-level exposure to asbestos had been deemed to be a high priority new and emerging issue and would be addressed at length at the November 2007 meeting with the aim of arriving at a definite position. He informed members that the purpose of the current discussion was to help achieve this aim by agreeing a clear plan for HSE to take forward. He referred WATCH members to the cover paper and asked them to consider the following : <ol style="list-style-type: none"> 1. What key questions should be asked at the November meeting ? 2. Who, with relevant expertise in asbestos, could be invited as ad hoc members ? 3. What papers and information might be needed ? 4. How should the session be structured ? <p>The Chairman opened the item for general discussion.</p>
4.2	Key questions relating to assessing the risks arising from low-level asbestos exposure In identifying the key questions, Dr. Dil Sen (HSE, Senior Medical Advisor) suggested it was important to clarify why WATCH was considering this topic and what were currently the drivers on HSE, other regulators or the industry to address the issue. He thought it was important to identify the interested parties and ensure that their concerns are addressed. The Chairman responded by giving a recap of the history of the risks from low-level asbestos exposure being an issue for WATCH. In 2006, WATCH explored two occupational scenarios relating to the risks of developing asbestos-induced cancers at levels of exposure that were appreciably lower than those which had traditionally been the focus of concern. These two scenarios involved the removal of textured coatings from ceilings in buildings and exposures arising from damage to asbestos insulation board in school buildings. Although the ultimate issue was the potential health risks associated with these relatively low-level exposures, WATCH only provided a position on the exposure levels related to these scenarios; there was insufficient agenda space and documentation available at that time to determine the levels of risk. The Chairman informed WATCH that HSE considered these two scenarios as specific examples relating to the broader topic of the risks to health involved in low-level exposure to asbestos in which there was on-going public and stake-holder interest. There are important questions regarding the potential health risks associated with exposures < 1f/ml, e.g. with exposure to 0.1 f/ml or 0.01 f/ml and how far down the dose-response curve can confident and defensible predictions of risk be made? The Chairman emphasised that in generically addressing the risks arising from low-level exposure to asbestos and providing a clear position statement on the key points, this could serve as a source for answering a range of related issues in the future.
4.3	Kevin Walkin (HSE Policy, Cancer and Asbestos) raised the issue of clearance levels for asbestos (clearance levels provide an indication of whether it was safe to re-enter work or

	<p>domestic premises after maintenance or remediation work had taken place). He pointed out that clearance levels had remained the same for a number of years and that questions have been raised over their validity. Given the low-level exposures likely to be associated with certain types of work activities (e.g. maintenance work) that have been associated with the risk of mesothelioma, an important issue was whether the current clearance levels are low enough.</p>
4.4	<p>A WATCH member asked what was known about the scale and pattern of low-level exposures from different occupational scenarios. The Chairman responded by referring to the two specific scenarios that WATCH had examined in previous meetings. One scenario related to the removal of textured coatings from ceilings in buildings built in the 1960s and 70s. The amount of exposure to free chrysotile asbestos during the removal process was found to be relatively low in comparison with occupations traditionally associated with significant exposure to asbestos. The other scenario examined exposures in school teachers and associated groups, following the use of drawing pins in asbestos insulation boarding used in the walls and ceilings of school buildings. It is potential exposure situations of this order that WATCH will be asked to address.</p> <p>A WATCH member added that in terms of the occupations that are showing significant numbers of current cases of mesothelioma, maintenance workers are a key group. Such workers may be coming across asbestos during work tasks, often without recognising it. Information about exposures in maintenance workers is not available. Given that the current control limit is 0.1 f/ml for all types of asbestos fibre, further clarification of what this means in terms of risk for different occupational exposure scenarios (involving different types of asbestos) would be useful.</p>
4.5	<p>Dil Sen suggested that the impact of work patterns on inadvertent low-level exposures to asbestos was an important consideration. As an example, maintenance work is often carried out at school buildings during the weekend or holidays; teachers and pupils have returned to find dust on desks when school has re-opened, and concerns have been expressed about the potential for such debris to contain asbestos. This scenario raises high levels of concern across various parties, and further investigation of low-level exposure to asbestos as a topic could help to quantify and contextualise whatever risks might be involved in such circumstances.</p> <p>The Chairman added that the potential for low-level asbestos exposure to arise in school and school teachers' exposure were issues which had emerged in previous discussions.</p>
4.6	<p>A WATCH member pointed out that in terms of understanding the general picture of the data available from epidemiological studies, the Hodgson and Darnton (2000) paper was an excellent review but it was not necessarily helpful from a practical perspective in the context of deciding whether or not sufficient control had been applied or residual concern remained for low-level exposures. As key questions, WATCH could explore the scope for extrapolating from the Hodgson and Darnton observed risk estimates to low-level exposures and whether the methods used for charactering the associated uncertainties are adequate. He added that another key issue for discussion could address the potential health outcomes associated with different types of asbestos fibre and whether control measures should be targeted in a discriminatory manner in this respect. He added that although risk managers were responding to concerns about low-level exposures to asbestos by taking various actions, more work was still needed to convert the science in to practical guidance.</p>
4.7	<p>Reports and papers for the November WATCH meeting</p> <p>The Chairman focused the discussion on the Hodgson and Darnton (2000) review of cohorts occupationally exposed to asbestos as potentially a key document to be considered at the November meeting. He asked WATCH to what extent members would want to scrutinise the individual epidemiological studies included in the Hodgson and</p>

	<p>Darnton paper (about 17 primary studies).</p> <p>Andrew Darnton (HSE, Statistics Branch) informed the Committee that another review of 20 cohorts occupationally exposed to asbestos, conducted by Berman and Crump in 2005 had looked at 14 /17 of cohort studies included in the Hodgson and Darnton review. A WATCH member asked whether any of the studies were particularly concerned with low-level exposures to asbestos? Andrew Darnton replied that most of the studies had involved workers receiving substantially higher levels of exposure than the levels which WATCH would be seeking to focus attention. He indicated that the Berman and Crump paper had looked at the dose-response relationships in the cohorts and had fitted a number of models to such data. He considered that this was therefore a key review paper.</p>
4.8	<p>A WATCH member agreed that it was essential to look at the data and risk estimates from the best cohort studies available. However, in terms of understanding health risks linked to low-level exposures, he also considered that it was essential to address what is known and available about situations that have given rise to 'sporadic' and occasionally reported cases of mesothelioma.</p>
4.9	<p>A WATCH member suggested that it would be useful to review the exposure information from the original cohort studies and consider patterns of exposure for different scenarios. If data were also available for patterns of exposure in occupational groups exposed to low-levels of asbestos (e.g. teachers, maintenance workers) this could be compared with the scenarios reported in the cohort studies.</p>
4.10	<p>Damien McElvenny (HSE, Statistics Branch) emphasised the importance of addressing the extent to which extrapolations could be made from the cohort data to lower exposure levels and the reliability of the derived risk estimates. In this respect he suggested that the committee should address the reliability of extrapolation techniques such as Monte Carlo analysis. He informed the committee that further analysis from a current case-control study by Professor Julian Peto, funded by the HSE, may provide additional information for consideration at the November meeting.</p>
4.11	<p>Based on the comments raised by WATCH members, the Chairman sought and received agreement from WATCH that the package of papers to be prepared for circulation and discussion at the November meeting would consist of :</p> <ul style="list-style-type: none"> • a cover paper setting out key questions for WATCH to address; • reviews by Hodgson and Darnton (2000) and Berman and Crump (2005) with a note giving a comparative analysis of the two papers prepared by HSE; • the original papers for the cohort studies covered by these analysis (approximately 20); • further information from the current case-control study by Prof. Julian Peto; • an overview prepared by HSE of the application of Monte-Carlo techniques for extrapolating to low exposure levels; and • summaries of relevant experimental toxicology work and information relating to low-level exposures scenarios (in this respect the "Asbestos Essentials" control advice sheets might prove useful). <p>Individuals also raised other analysis that might be informative, such as a Defra document on background levels of exposure to asbestos and background incidence of mesothelioma; and on-going work at HSL continuing to explore exposure asbestos and risk. The HSE team assembling the package for the November meeting will need to consider the potential value of involving such additional material.</p>
4.11	<p>Discussion on 'ad hoc' members</p>

	<p>The Chairman indicated to WATCH that inviting experts from different disciplines relevant to the asbestos issue to attend the November meeting as ad hoc members would help strengthen the committee's expertise on asbestos and assist in its deliberations on low-level asbestos exposure. He asked WATCH members for their general views and suggested that 4 or 5 additional ad hoc members would be an appropriate number to invite.</p> <p>Following general discussion between the Chairman and WATCH members, there was agreement that the committee would invite experts from the areas of: epidemiology; statistics; occupational hygiene and exposure control; and thoracic medicine to attend the November meeting as ad hoc members. Consideration would also be given to the need for an expert with specialist knowledge of fibre toxicology.</p> <p>WATCH members made further suggestions of organisations that could offer helpful insights into asbestos issues. A WATCH member pointed out the Industrial Injuries Advisory Council (IIAC) could be approached in relation to the 'sporadic' cases of mesothelioma and that other government departments, such as Defra or the Environment Agency, currently provide advice about asbestos in domestic situations. A number of overseas organisations were also discussed (United States Environmental Protection Agency, German MAK Commission). The Chairman suggested that the package of papers for the November meeting could be circulated to these bodies in advance and written comments invited from them. Later, these organisations could also be invited to comment on the draft position arising from the November meeting. The Chairman asked members to provide the WATCH Secretariat after the meeting with the names of any experts from the wider circle of organisations deemed appropriate to include in such consultation.</p>
4.12	<p>Format for the November meeting session and expected outcomes</p> <p>The Chairman focused the discussion on how the item on low-level asbestos exposure should be structured at the November meeting. He suggested that Andrew Darnton from HSE's Statistics Branch could lead the discussions on the two reviews by Hodgson and Darnton (2000) and Berman and Crump (2005). This section could include a comparison of the findings from the respective reviews and the consideration of primary studies as appropriate. Following on from this, invited ad hoc members could be asked to each give a brief presentation of how they see the situation relating to the questions posed, possibly starting with the epidemiologists' perspectives. He stressed that the item would probably require a large amount of time and acknowledged that the structure of the session would also need to be flexible. A WATCH member added that ad hoc members could be asked to provide to the WATCH Secretariat beforehand a brief outline of the areas they would want to focus on and any additional supporting papers so that such information could be made known to the whole committee in advance of the November meeting.</p> <p>Rob Turner (HSE, Risk Management Unit) asked the Chairman to clarify what it was expected that WATCH would achieve at the end of the session on this topic at the November meeting. He thought it was important to define this objective as part of the planning stages to help keep the discussion constructive and focused. The Chairman replied that the ultimate goal of the November meeting was for WATCH to develop a position statement on what could be said with scientific confidence about the risks to health posed by low-level exposure to asbestos. For example, if based on the committee's further deliberations, it concluded that valid risk predictions could be made for specified low-level exposures, such predictions would be stated as a position, together with a statement on the associated level of confidence in the predictions. Alternatively, the position statement might reflect the committee's view that valid risk predictions cannot be made for exposures in a specified "low-level" range. He added that the position statement could also reflect WATCH's views on a range of broad issues related to low-level exposures (e.g. background / ambient air concentrations of asbestos; the characteristics of exposed populations; cumulative and intermittent exposure scenarios and the</p>

	appropriateness of particular exposure metrics such as f.years /ml.
4.13	<p>The Chairman thanked members for their comments. In concluding what had emerged from the discussions, he sought and received confirmation from the Committee that they had agreed the following in planning the session on the risks from low-level asbestos exposure at the November WATCH meeting:</p> <ul style="list-style-type: none"> • A package of cover and annexed papers will be provided which will include : the Hodgson & Darton/Berman & Crump reviews supplemented by a note giving a comparative analysis prepared by HSE; cohort studies; additional data from the Julian Peto case control study; a note on Monte Carlo extrapolation methods; a summary of relevant experimental toxicology findings and scenarios involving low-level exposures. • Five or six experts in the fields of epidemiology; statistics; occupational hygiene and exposure control; and thoracic medicine will be invited to attend the meeting as ad hoc members. Consultations with other relevant organisations or experts will be carried out by correspondence. • The November session would aim to follow a structured format involving a number of initial presentations by ad hoc members and experts from HSE on key issues, but would be flexible. A substantial time period would be given to this item. • The overall aim of the session was for WATCH to develop a clear position statement on what it considers can be said with confidence about the risks to health of low-level exposure to asbestos covering different asbestos fibre types, diseases and exposure levels.
4.14	ACTIONS : HSE to assemble the appropriate package and invite ad hoc experts for the November 2007 meeting. WATCH members to forward any suggestions to the WATCH Secretariat for organisations and experts to consult by correspondence (ref 4.11).
5	Metal Working Fluids
5.1	The Chairman opened this item by reminding WATCH that this topic had been identified as a 'new and emerging issue' worthy of further exploration at the November 2006 meeting. Gareth Evans (HSL, Health Exposures Section) had prepared a collection of papers providing an overview of the topic. The Chairman introduced Ian Gardner (HSE, Occupational Hygiene, FOD), to give some background to the issue and an overview of HSE's related activities.
5.2	<p>Investigations at the Powertrain Ltd. plant</p> <p>Ian Gardner informed the committee that interest in and concerns about health risks posed by metal working fluids (MWF) had emerged from a large-scale investigation of reported cases of extrinsic allergic alveolitis and occupational asthma at Powertrain Ltd in Longbridge, Birmingham. The plant used large quantities of water-based MWF and various respiratory effects were reported in around 100 workers. The investigation concluded that the probable cause of the respiratory diseases was bacterial contamination of MWF at the site. Following this outbreak, HSE carried out a number of visits to other small and large users of MWF to establish what control measures were in place.</p> <p>The investigation at Powertrain Ltd began after a number of workers were referred to chest physicians at the Birmingham Chest Clinic. HSE closely examined the components of the MWF used at the site. Although potential links to chemicals constituents such as cobalt or formaldehyde were considered, the potential levels of exposure to these substances suggested that they were not an issue at the site.</p>

	<p>Based on air monitoring of MWF levels carried out at the site by HSL, exposure to MWF was deemed to be within the guidance levels specified in HSG 231. However, as a consequence of disease occurring under such circumstances, HSE has withdrawn HSG 231 and issued a new set of leaflets that placed more emphasis on control aspects.</p> <p>Ian Gardner informed the committee that in addition to the incident at Powertrain Ltd, there had been two other outbreaks at large MWF user sites. In these outbreaks respiratory diseases were observed in between 10 and 20% of the work-force. Investigations carried out by HSL indicated that bacteria-derived endotoxins may have been involved.</p>
5.3	<p>How to progress the 'new and emerging' issue of metal working fluids</p> <p>The Chairman thanked Ian Gardner for the presentation. He asked the committee to consider whether WATCH could take the issue forward and how this could be done. The Chairman invited discussion on this theme by referring members to the set of questions in Point 14 of the cover paper.</p>
5.4	<p>A WATCH member commented that if occupational health risks associated with bacterial contamination of this sort were not deemed to be issues for WATCH (as some might consider to be the case), who was best placed to look at this further. He thought that if asbestos, a 'naturally occurring fibre', is included in WATCH's remit, then the issue of health risks posed by MWF and its contaminants should also be considered appropriate for attention by WATCH. Another WATCH member added that some chemicals can influence the permeability of biological membranes to other substances; hence the biological and immunological reactions elicited by some substances can be exacerbated by co-exposure to chemicals. Gareth Evans agreed that it is not entirely clear whether the respiratory effects were caused exclusively by bacterial contamination. For example, it is possible that components of MWF could cause irritation to the respiratory system and enhance the consequences of bacterial contamination.</p>
5.5	<p>The Chairman pointed out that it seems that a broad range of bacteria could potentially be linked to the health effects observed since many types of bacteria are known to cause respiratory symptoms. This was not a situation involving a specific, highly pathogenic bacterium and its associated disease. In response, Brian Crook (HSL, Health Exposures Section) agreed this was true and emphasised that the issue was complex, given that many biological agents can produce endotoxins. Contaminated MWF can contain high concentrations of bacteria; the quantity of bacteria involved and the associated protein levels in fluids are important issues.</p> <p>A WATCH member commented that whilst extrinsic allergic alveolitis could be linked convincingly to bacteria, the evidence for a link between asthma and bacteria was less clear. He asked with what level of confidence could the respiratory diseases seen be linked specifically to bacteria as opposed to, chemicals or a combination of both? Gareth Evans agreed the point but emphasised that most of the cases seen at the Powertrain Ltd plant were not allergic asthma. Another WATCH member pointed out that particular bacterial proteins and carbohydrates, rather than the whole bacterium cause allergic reactions, and these macromolecules can persist even after the end of the life of the bacterial cell. This was a likely scenario given that hot water, which may have helped to limit the expansion of bacterial contamination, had not been used at the plant. Based on the analysis HSL had done, Gareth Evans indicated that the bacterial protein content of many samples, including aged ones, was well preserved.</p>
5.6	<p>A WATCH member felt that it was unclear whether this was genuinely a new emerging issue or was an old recognised issue that had arisen here because of poor management. With regard to page 7 of Annexe 1 of the report, he asked for clarification as to why no cases of respiratory diseases at the Powertrain Ltd plant had come to the attention of occupation health practitioners before 2003, after the peak of the outbreak had occurred? Ian Gardner replied that individual cases prior to 2003 had been noticed but each one in</p>

	<p>isolation; the common location and timing was not clearly recognised until they had been referred to medical professionals some time later.</p> <p>The WATCH member then asked whether contamination of the smaller systems at the plant could have been responsible for the cases of diseases? In response, Ian Gardner said that comprehensive records had been kept at the plant for 160 large machines as part of a MWF supply contract. These were well managed and shown to be sterile from dip slide tests results in the records. Although small machines were also examined at the start of the supply contract, over time their management became superficial based only on pH measurements and assessment of smell. Ian Gardner indicated that it was possible that bacterial contamination of the smaller machines could have caused the disease, but these were located in a different part of the plant from where many of the cases worked for most of their time. He added that washing machines used in the plant were another potential source of the problem. Although they only contained diluted MWF, they could disperse aerosol widely. Furthermore, many processes at the Powertrain Ltd plant had changed over time, and it was difficult to accurately assess the situation as a whole at the time leading up to the outbreak.</p> <p>The WATCH member expressed the opinion that this demonstrated that dip slide monitoring should have been carried out on both small and large machines and reiterated the comment that this seemed to be an issue of poor management of a known issue rather than a new issue.</p>
5.7	<p>Dil Sen informed WATCH that the topic was an area of interest to him and put forward some observations. Firstly, he asked the committee to consider whether the disease profile and pattern could be specific to the United Kingdom (UK). Although there have been some cases of respiratory ill-health following exposure of workers to contaminated MWF in the United States, different organisms were involved. In a 10-year Finnish study of metal working machines, workers experienced dermatitis as we would probably expect, but numbers of cases of asthma and, in particular, extrinsic allergic alveolitis were very few. He proposed therefore that this phenomenon could be specific to the UK, possibly due to companies failing to comply with COSHH and poor practice. Secondly, he stated that the reliability of the diagnostic criteria currently used to establish the different respiratory diseases reported was an important issue which needed further investigation. As a final comment, he felt there was a need to broadly review the literature related to this topic in order to provide the proper context in which to view the Powertrain outbreak.</p>
5.8	<p>A WATCH member asked how representative the incident at the Powertrain Ltd plant was of MWF use more generally? He commented that if the incident was due to specific failures of compliance on the part of the company, then he did not think WATCH was well placed to take this further. If however, there had been compliance with existing standards and the situation was deemed to represent the industry more broadly, then he thought this could be an important issue for WATCH. He was not convinced that the scientific evidence totally supported the hypothesis that the health effects related wholly to the bacterial contamination of MWF. Alternative hypotheses were also possible: including possible changes in the composition, use and acidity of MWF producing unexpected adverse consequences. He also questioned whether allergic responses had genuinely been observed.</p> <p>Another WATCH member was puzzled as to why the Powertrain Ltd plant had the largest known outbreak of this kind in the world, given that there were hundreds of other workplaces using MWF. He added that the plant had reported 20 cases of extrinsic allergic alveolitis whereas the SWORD (Surveillance of work-related and occupational respiratory disease) system received reports of perhaps 1 case every 5 years. He asked whether there were specific risk factors at the Powertrain Ltd plant or whether any uncommon practices had been used compared to other workplaces. Ian Gardner responded by informing the committee that the outbreak at the Powertrain Ltd Plant had not been an</p>

	<p>isolated incident. Two other smaller-scale outbreaks had occurred in sites in Nottinghamshire and Yorkshire. A WATCH member asked whether the investigations at these two other sites had provided any further insights. Dil Sen replied that the scale and nature of the follow-up investigations of these other outbreaks was much smaller and nothing further had been learnt from these incidents.</p>
5.9	<p>Further investigation of the causative factors for respiratory disease</p> <p>The Chairman brought WATCH back to the first question under Point 14 of the cover paper that asked whether further investigations in to the causative factors of the Powertrain outbreak was warranted. Dil Sen thought that this topic was an appropriate one for WATCH and that further work, which could include looking in more depth at the scientific evidence base and the diagnostic criteria used for recording extrinsic allergic alveolitis in these cases was warranted. A WATCH member agreed with Dil Sen and asked whether it was feasible to conduct an investigation of sites without a problem and compare the findings historically with the Powertrain Ltd plant. Another WATCH member expressed doubt whether further investigations would be able to provide useful insights, given the complexity of the issue as a whole and that the nature of disease outcomes was unclear. He thought it would be difficult to identify the key research questions and develop associated study protocols. The Chairman asked the WATCH member to clarify whether he was referring to new studies or to the review of existing literature. The WATCH member replied that his comments referred to new studies and he did not object to a review of the literature. Another WATCH member also expressed doubt that further research would help find solutions to this problem, other than highlighting that better control was needed.</p>
5.10	<p>Better management of MWF</p> <p>The Chairman referred WATCH to the second question under Point 14 of the cover paper. He asked members to consider whether the further investigation of the management of MWF was the preferred option or whether this approach alone without considering possible causes would raise concerns.</p> <p>Members responded by emphasising again the need to define the problem more clearly, in terms of what is understood from national and international experience. Dil Sen proposed again that a literature review was carried out to help define the issues.</p>
5.11	<p>HSE overview of current activities</p> <p>The Chairman referred WATCH back to the third question of Point 14 of the cover paper: Which individuals / organisations can contribute to taking this action forward? In addressing this question he invited Ian Gardner to inform the committee of the HSE's current thinking on the MWF issue and the actions it planned to take.</p> <p>Ian Gardner informed the Committee that the HSE Field Operations Directorate was carrying out visits to sites to monitor the management strategies companies were using for MWF and to ensure that adequate control measures were in place. The UK Lubricant Federation had assisted HSE with inspection and dissemination activities. HSL is also currently working with suppliers on matters relating to the supply and management of MWF.</p> <p>HSE is currently developing further guidance on MWF in place of HSG 231. He raised a number of comments in relation to the effective management of MWF. The lack of a guidance value for the control of airborne exposure was presenting companies with difficulties in terms of knowing how low exposures would need to be in order to be as low as reasonably practicable. Furthermore, analytical practices carried out to assess compliance with HSG 231 may have underestimated the amount of water in aerosol and hence could potentially have underestimated the true amount of bacteria in MWF systems. He stressed that improvements to the technical aspects of approaches and guidance were</p>

	important elements in securing effective strategies for managing MWF.
5.12	<p>WATCH as the appropriate committee for addressing this issue; and appropriate response</p> <p>The Chairman asked WATCH to take a view on the overall importance of the issue of MWF and to decide whether it should be taken further forward by the committee and if so, how. Roger Brentnall (HSL, Horizon Scanning Unit) pointed out that there are currently other 'drivers' in the workplace which are promoting the wider use of water-based systems, for example as processes move away from using organic solvents. This suggested that the problem of potential bacterial contamination of water-based fluids might be more widespread, potentially affecting industries beyond those concerned with MWF.</p> <p>A WATCH member thought that given that groups of people had been incapacitated as a result of working with MWF and there was uncertainty about the reasons for the inadequacy of control, WATCH should take this topic further by investigating the possible mechanisms by which such problems can arise and evolving concepts for better control measures. He added that there could be more cases than have currently been recognised, hidden in smaller companies. Another WATCH member agreed that under-reporting of respiratory illness linked to working with MWF was conceivable as General Practitioners might not be able to relate respiratory disease to this exposure scenario. A WATCH member added that even professionals in the occupational health field might not be aware of this potential problem.</p> <p>Another WATCH member said that based on the discussions, he felt that it could not be assumed that control measures were being widely applied across the industry or that they were effective in combating this potential problem. Hence it was an important issue for further attention.</p> <p>Another WATCH member commented that irrespective of who is best placed to take this issue further forward, a logical starting point would be to establish a clear understanding of the potential causes of the respiratory diseases linked to MWF. He was not convinced that evidence gathered from Powertrain Ltd incident completely supported either bacterial or chemical causes.</p> <p>Another WATCH member felt it was important to engage the industry, trade bodies and MWF manufacturers in any further work.</p> <p>The Chairman noted that WATCH members had expressed a consensus of opinion that the understanding and avoidance of respiratory disease potentially arising from working with MWF was an issue for the committee. He added that, although the health outcomes may be linked to bacterial contamination, the issue still related to the control of chemical substances and therefore aligned with the focus of WATCH.</p>
5.13	<p>The Chairman sought and received confirmation from WATCH that its recommendation was that WATCH is the appropriate committee to progress this issue. He advised WATCH that HSE would now reflect on this discussion and would draft a note setting out the proposed way forward.</p>
5.14	<p>HSE ACTION: To prepare a note setting out the key points from the discussion and proposing what needs to be done next, to be sent to WATCH members before the next meeting.</p>
6	<p>IGHRC Document on Chemical Mixtures</p>
6.1	<p>The Chairman introduced Elanor Ball (HSE, Chemical Risk Management Unit) who had prepared the final draft of the report "<i>Chemical Mixtures: A Framework for Assessing Risks</i>" on behalf of the Interdepartmental Group on Health Risks from Chemicals (IGHRC). He explained that it was normal practice for the IGHRC to circulate its reports</p>

	<p>around the scientific advisory committees of different government departments for comments. He referred WATCH members to the action in Point 14 of the cover paper and invited them to comment on the draft.</p>
6.2	<p>A WATCH member thought the draft provided a great deal of good material and was well laid out. He raised a general comment regarding the use of the term 'risk' in the text when in many cases 'hazard' was intended, given that exposure issues relating to chemical mixtures had not been covered in the report. Since risk assessment combines hazard and exposure aspects, the use of the term 'risk' could erroneously imply that the report intended to provide comments on risk without having addressed exposure. He illustrated the point using the example of powders frequently used as mixtures. The size of particles in powder mixtures influenced their ability to become airborne; hence important determinants of exposure could be the key determinants of risk. He suggested that the text was revised where necessary to use risk and hazard concepts more accurately.</p> <p>The WATCH member also commented that the risk assessment approach presented in the report tended to align with environmental risk assessment where the use of 'average' exposure levels was often appropriate. He stated that occupational risk assessment often focused on exposures in individuals and required consideration of individual circumstances, rather than population averages. He stressed the importance of recognising that whilst the general approaches presented for the risk assessment of chemical mixtures were applicable to a number of regulatory contexts, they may not be so relevant to others.</p> <p>Another WATCH member agreed that the completeness of suggested framework for assessing risks of chemical mixtures presented in the report could be improved by incorporating more emphasis on exposure. He suggested the flow chart on page 53 of the report could be modified to incorporate consideration of exposure.</p> <p>The Chairman commented that the suggestions made by WATCH members were helpful and, in light of these comments, Elanor Ball agreed to make appropriate modifications to the report. Beyond the specific comments raised, the Chairman observed that members appeared to have no substantial criticisms of the document and confirmed that the committee was content with the report.</p>
6.3	<p>The Chairman sought and received confirmation from WATCH that it was content with the draft IGHC document on chemical mixtures, subject to the changes suggested above.</p>
7	<p>Recycling</p>
7.1	<p>The Chairman introduced the item by reminding WATCH that recycling had been identified as a new and emerging issue at the November 2006 meeting and had been discussed further at the February 2007 meeting. As agreed at the November 2006 meeting the report prepared by Peter Ellwood (HSL, Horizon Scanning Unit) in Annexe 1 was sent to Helen Castles (an ad hoc 'COPI' member at the November 2006 meeting) whose comments are documented in Annexe 2. The Chairman referred members to additional papers on recycling annexed to the item.</p> <p>The Chairman opened the item for discussion by asking WATCH members to agree a position for this new and emerging topic by considering whether the committee was well placed to take the issue forward and, if so, what actions were needed.</p>
7.2	<p>WATCH as the appropriate committee for this issue</p> <p>A WATCH member commented that the waste sector was a growing industry linked to many hazards for which the risks had not been well characterised. He did not consider this to be an issue for WATCH to act upon, but emphasised that HSE should ensure that employers in the sector are following COSHH principles. Another WATCH member commented that the relatively high accident rates associated with the waste sector might</p>

	<p>indicate that control and management practices are poor and need to be addressed.</p> <p>Another WATCH member agreed that the industry was growing and that certain activities such as waste separation were relatively novel, but in terms of the hazards involved, it was difficult to isolate chemical hazards from biological or physical hazards, such as 'sharps'. Given that other organisations were looking at some of these issues, he did not see a clear role for WATCH in this issue at present.</p> <p>A WATCH member indicated that recycling was an important industrial sector to monitor for a number of reasons. He informed the Committee that the waste industry is increasingly seeking advice from occupational health professionals about appropriate health surveillance schemes to introduce in the industry. However, this is problematic given the complexity of the hazards and dynamics of the waste sector. Secondly, he thought that recycling was an important issue from an ethical perspective. If recycling activities on UK waste are transferred overseas, the conduct of such operations under poor control conditions could impact adversely on the health and safety of people in other countries. In terms of specific hazards, he wondered whether the disposal of medicines could be an issue. As a final comment, he pointed out to the committee that although certain hazards might be linked to the waste sector, this did not necessarily imply that there are risks to human health. In this context, he drew attention to the presence of legionella in compost as an example; this did not entail a risk of legionellosis.</p>
7.3	<p>HSE perspectives</p> <p>The Chairman invited Roger Brentnall (HSL, Horizon Scanning Unit) to provide WATCH with HSE's perspectives on recycling.</p> <p>Roger Brentnall informed the committee that as an issue for HSE, recycling was a complex problem because it involved many types of industrial processes and activities (i.e. transport; manual handling; process safety; new processes such as sorting; and chemical, biological and physical hazards). There were many related issues that added to the complexity, such as: the growth of the industry, the demographics of the increasing workforce and the poor health and safety record of this sector. On this basis, he stressed that recycling was an important issue for HSE. In terms of what HSE was doing, he informed the committee that the aims of the horizon scanning activities on recycling had been to raise its profile as a key issue and to embed it into HSE's forward-looking policy and business planning agendas. He emphasised that achieving this was a challenge for the Horizon Scanning group and he welcomed support from WATCH in respect of helping the process.</p>
7.4	<p>Gathering further information and data</p> <p>A WATCH member commented that although no major health concerns associated with the waste sector were apparent at present, there was a need to gather information in light of the growth of the industry. Another WATCH member agreed that gathering of information about the principal chemical and biological hazards involved would be useful and this could be used, in the future, for the analysis of trends.</p> <p>A WATCH member commented from past observations that old issues that had emerged and been addressed in certain industrial sectors sometimes re-emerged in different sectors as new problems. He expressed concern that this could apply to recycling, particularly in parts of the sector that lacked the infra-structure to deal with potential issues effectively. He asked whether the HSE had gathered any insights from its Field Operations staff in this respect? Rob Turner (HSE, Chemical Risk Management Unit) replied that HSE's limited resources did not currently gather additional information of this kind. He explained that one of the reasons the Horizon Scanning Unit had been set up was to provide a mechanism for flagging key issues to HSE and identifying the priorities justifying further attention and resources. The concept was that this process would enable outcomes of Horizon Scanning work to be translated into practical activities. For example,</p>

	<p>Field Inspectors could be asked to gather information on a priority issue or HSL could be commissioned to conduct research to gather data as part of site visits. So far, recycling had not been given such priority status.</p> <p>He added that there are a number of on-going HSE projects which relate to recycling but are focusing on specific problems such as transport or accidents. In these cases Inspectors have visited sites, collected information and given out advice. He pointed out that although the chemical hazard/risk aspects of recycling presented more of a challenge to HSE, it was aware of a number of issues relating to specific chemical hazards (e.g. mercury) in recycling processes. Nevertheless, HSE currently had little information or insight into the levels of the exposure to a variety of agents that workers may be encountering in recycling settings. He stressed that exposure data would be clearly needed to carry out a proper evaluation and assessment of the potential risks.</p> <p>In terms of gathering a clearer picture of the recycling industry, a WATCH member asked what is known about the dynamics of the waste sector in terms of public versus private ownership; number of low paid workers and worker turnover etc. This type of data could be used to inform and target regulatory activity. Based on his observations of biomonitoring investigations for metals that waste sector companies had carried out on workers, the data was of poor quality and difficult to interpret. This raised the issue of how appropriate data can be collected and by whom.</p> <p>Another WATCH member pointed out that in order for sites to process waste, they must be licensed by the relevant Local Authority. He asked whether, as part of Local Authority licensing schemes, information about the types of processes, workers involved etc would be stored on databases and could serve as a useful source of data. He added that although HSE Inspectors would probably not visit many of these sites, Local Authorities would and may be well placed to acquire data.</p>
7.5	<p>The Chairman summarised this item by noting that members did not see any immediate work that WATCH, as a committee, should do on the topic of recycling. However, WATCH had highlighted the following points:</p> <ul style="list-style-type: none"> • The industry had several important characteristics (i.e. rate of growth; demographics; accident figures; general awareness of health and safety issues and the lack of familiarity with existing hazards) that needed to be monitored over time. As well as gathering general information, useful insights into emerging trends across the industry could be gained by initiatives to track specific metrics over a number of years. In making a case for such work, one could draw attention to the particular issues that might warrant further consideration. • In carrying out recycling activities, employers should be aware of the moral obligations towards their own employees but also in respect of other workers elsewhere, in transferring hazards overseas. • Given that health and safety issues associated with recycling are broad and involve physical, biological and chemical hazards, control and management measures should address the whole spectrum. <p>The Chairman confirmed to the committee that these perspectives would be conveyed to HSE.</p>
7.6	<p>ACTION : WATCH Chairman to convey these observations to the HSE Horizon-Scanning unit and to ACTS, via the “WATCH Report to ACTS”.</p>
8	<p>Low Toxicity Dusts</p>
8.1	<p>Report back from ACTS May 2007 meeting</p>

	<p>The Chairman opened this item by reminding WATCH that the issue of low toxicity dusts had been discussed at length at the February 2007 meeting. Following the meeting, the agreed portrayal of the dose-response relationship for respirable coal mine dust and the associated observations and recommendations from WATCH were presented at the ACTS May 2007 meeting as part of the consideration of priorities for the HSE Disease Reduction Programme (DRP). The Chairman invited WATCH members who were also members of ACTS to report back on discussions from the ACTS meeting.</p>
8.2	<p>A WATCH/ACTS member informed the committee that the report from WATCH had been well received by ACTS. The ACTS committee acknowledged that the dose-response curve was related specifically to respirable coal mine dust but thought it effectively pointed out that the current reference levels for airborne concentrations of dust (10 mg/m³ inhalable dust and 4 mg/m³ respirable dust) may be too high if adherence to them is judged to offer adequate health protection for workers. Overall, strong views had been raised that addressing the control of dusts should be a key part of the DRP, specifically in relation to reducing the occurrence of long-term respiratory disease including chronic obstructive pulmonary disease (COPD). Although it was generally agreed by ACTS that work to review the '10/4' reference levels was needed, it was also suggested that more immediate action to control exposures could be taken based on the information already available.</p> <p>The WATCH/ACTS member emphasised the point to the committee that there had been strong agreement between the social partners at the ACTS meeting that the issue of control of exposure to dusts in general should be taken forward as a priority item as part of work on COPD.</p> <p>Another WATCH/ACTS member informed the committee that it had been suggested at ACTS that to some extent, it should be accepted that COPD and related respiratory diseases are a reflection of general failings in exposure control. More effort should be devoted to improving the control processes rather than to detailed analysis of the diseases and their mechanisms.</p> <p>He informed WATCH that the science undertaken and commissioned by HSE on the evidence-base for COPD was currently being examined within the pilot phase of a prospective review of HSE's science strategy by an external group (involving Defra, DWP and independent advisors).</p>
8.3	<p>The Chairman thanked the two WATCH members who had reported back from the ACTS meeting. He added his own view on the May 2007 ACTS meeting by indicating that ACTS had strongly pressed HSE on the issue of dust control. HSE had agreed with some of the views of ACTS, but had reservations about others. HSE had expressed concerns about modifying the '10/4' levels and indicated they involved important issues in terms of regulation under COSHH. He concurred with the comment that the report on coal mine dusts from WATCH had been well received by ACTS. In taking the issue further, ACTS was advocating a twin-track approach in which it would want WATCH to finish its work, but would also want to use existing knowledge to develop a control initiative which could be launched quickly.</p>
8.4	<p>Update on agreed WATCH work plan on low toxicity dusts</p> <p>The Chairman then focused the discussion on the work that WATCH had agreed at the February meeting to progress the issue of dusts and referred members to Point 4.28 of meeting minutes. In terms of work which had already been completed, he considered that the first, third and first part of the second bullet point had been addressed by informing ACTS about the dose-response relationship for coal mine dust. The fourth bullet point, which referred to the clarification of terms for defining dusts, had also been adequately addressed. He suggested to WATCH that the latter part of the second bullet point that referred to 'defensible statements justified by data for the other dusts included in the IOM</p>

	<p>analysis' had not yet been delivered. Given the response ACTS had made to the work on dusts that WATCH had done so far, he thought that ACTS would also be interested in WATCH providing a view on the other dusts in the IOM research and possibly also dusts not covered.</p> <p>The fifth bullet point referred to providing advice to duty-holders about dealing with dusts that were less well characterised. He asked WATCH whether it considered that work should be carried out to guide duty-holders towards using a 'best-fit' approach for controlling less well-characterised dusts based on reading across to the most similar dust with a well-characterised dose-response relationship. He illustrated this approach using a number of scenarios. For example, if the IOM analysis of PVC dust was deemed to be sound and the dose-response relationship was different to that for coalmine dust, companies dealing with polyethylene dust might use the PVC dose-response relationship as a benchmark. Alternatively, if during demolition scenarios, general brick dust was of interest, the dose-response relationship for coalmine dust would be more appropriate as a well-characterised benchmark.</p> <p>In this context, the Chairman asked whether WATCH members considered that there were datasets for dusts other than coalmine dust that could be looked at. A WATCH member replied that the IOM report had looked at a limited number of dusts but that datasets on others (carbon black and kaolin) could provide useful insights. He added that it was worth identifying and analysing datasets for other dusts to establish whether these low-solubility dusts followed a generic dose-response curve.</p>
8.5	<p>Planning an item on low toxicity dusts at the November WATCH meeting</p> <p>The Chairman informed WATCH that ACTS had made a general statement that it wanted to reaffirm its links with WATCH and had expressed interests in knowing more about the issues WATCH was exploring. It was likely that the issues of low toxicity dusts would be considered again at the next ACTS meeting in November 2007. He affirmed with members that they agreed that WATCH should seek to complete the actions referred to in paragraph 8.4, specifically in relation to other dusts. HSE would undertake appropriate preparatory work such that WATCH could revisit it at its next meeting. The aim of the session at the November WATCH meeting would be to develop clear positions on dusts other than and in comparison to coalmine dust.</p> <p>A WATCH member recalled the discussion at the last WATCH meeting about what would be currently feasible levels of control for dusts. He asked whether WATCH should be assembling relevant information in preparation for consideration by ACTS?</p> <p>A WATCH/ACTS member reiterated that ACTS was not content with the '10/4' levels and was in support of WATCH investigating this issue further. Rob Turner (HSE) stressed that '10/4' reference levels are not occupational exposure limits, but triggers for more detailed assessment under the COSHH regulations and added that perhaps HSE needed to get this concept across to duty-holders more clearly. If these reference levels were lowered and re-cast as 'reasonably practicable' limits, this would represent a different concept in relation to exposure control. This could potentially involve a lot of additional work.</p> <p>Another WATCH member argued that if the '10/4' levels were reviewed, there may be logic in aligning any emerging position with the 'single limit' philosophy underlying the introduction of the WEL system to ensure consistency.</p>
8.6	<p>There being no further comments, the Chairman thanked members for their comments and brought discussion on this item to a close.</p>
8.7	<p>The Chairman sought and received confirmation from WATCH that its recommendation was that low toxicity dusts would be discussed further at the November WATCH meeting. The item would attempt to deal with the outstanding issues under Point 4.28 in the February 2007 minutes.</p>

8.7	ACTION: HSE to prepare the appropriate paper for the November WATCH meeting.
9	Date of next meeting
9.1	The Chairman thanked everybody for their contributions. The Secretary reminded WATCH that the next meeting will be held on the 7 th and 8 th November at a venue yet to be confirmed. The meeting closed at 15.30.