

**WORKING GROUP ON ACTION TO CONTROL
CHEMICALS**

WATCH/MIN/2009/1

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Minutes of the 15th meeting of the Working Group on Action to Control Chemicals held on 24th February 2009, Globe Room, Rose Court, London

Members Present

Steve Fairhurst (Chair)
Steve Bailey
Robin Chapman
Rosemarie Hutchinson
Len Levy
Steve Binks
Martie van Tongeren
Ching Aw
Alastair Hay
Len Levy
David Farrar
Robin Howie (ad hoc member)

Apologies

Tony Fletcher
Steve Williams

HSE Officials Present

Nicola Gregg (Secretariat)
Anna Rowbotham (Secretariat)
Hayley Keating (Secretariat)
Rob Turner
Andy Darnton
Garry Burdett
Gareth Evans
Chris Barber
John Cocker
John McAlinden
Helen Smith

1	Introductions and apologies
1.1	The Chairman welcomed everybody to the 15 th meeting of the committee. Apologies were received from Tony Fletcher and Steve Williams.
2	Administrative issues
2.1	The Chairman asked for any declarations of interest related to the items on the agenda. David Farrar and Ching Aw expressed an interest in the item on welding fume and COPD. Robin Chapman expressed an interest in azo dye penetrants.
2.2	WATCH secretary Nicola Gregg reminded WATCH members to send in their expenses claim forms in time for the end of the financial year 08/09.
2.3	Dates for next meeting The secretary asked members to indicate which dates were appropriate for the 16 th WATCH meeting to be held in June at the Town Hall, Bootle. Members agreed the 12 th of June as the date for the next meeting.
2.4	Adoption of agenda WATCH members agreed to adopt the proposed agenda (WATCH/Agenda/2009/1).

3	Minutes of 14th meeting
3.1	Members had commented by correspondence on the draft minutes of the 14 th meeting. As a result a few small editorial changes needed to be made to the version available at the meeting (WATCH/Min/2008/1). Members agreed that the Secretariat would make these changes and then the minutes would be deemed to be finalised.
3.2	Matters arising/Secretary's report There were no matters arising from the October 2008 WATCH meeting.
4	Asbestos: Initial thoughts on a control banding approach to risk management
4.1	The Chairman opened this item by reminding members that this item was a development arising from the committee's conclusion to the October 2008 WATCH meeting. In the statement derived by WATCH regarding what statements can reliably be made about the risk of mesothelioma and lung cancer at different exposure levels to asbestos, WATCH had committed to further exploring the possibility of a control banding approach. That was now the purpose of this item. He informed members that while he was not expecting the committee to reach a definitive position on a banding approach at this meeting, he expected that at the conclusion of the debate there would be a clear direction for the further work that was deemed necessary to finalise a position. He thanked Garry Burdett (Fibres Section, HSL) and Andy Darnton (Statistics Branch, HSE) for preparing the paper. This portrayed the line of thinking that had emerged from the conclusions to the discussion on asbestos held at the October 2008 WATCH meeting; numerical estimates of the risk of cancer for different levels of exposure to different types of asbestos fibres could be used as the basis for applying a risk/control banding concept. He invited WATCH members to give their initial thoughts on the paper and asked if they wanted to clarify or challenge any aspects of the paper. The Chairman opened for general discussion.
4.2	<p>A member indicated that he had looked further at the data considered at the last WATCH meeting. He noted that in deriving the risk estimates presented in the WATCH conclusion, the degree of extrapolation from the available chrysotile data was much greater than that for the crocidolite and amosite data, as the exposures in the occupational epidemiological studies for chrysotile tended to be considerably higher than for the studies involving exposure to the amphibole forms. This would imply that the degree of uncertainty associated with extrapolations made on the basis of the amosite and crocidolite data would be less than that associated with extrapolations based on the chrysotile data.</p> <p>Andy Darnton confirmed that this observation was valid. The exposures involved in the chrysotile studies had been much higher than those for the amphibole fibre types. The WATCH member asked whether it was possible to determine the relative degrees of uncertainty associated with the different extrapolations presented for the three types of asbestos fibres? Andy Darnton replied that the confidence intervals were one expression of the uncertainty in each case.</p> <p>The WATCH member gave his reasoning for raising this point. In the published H&D model, the same level of uncertainty applied to all types of asbestos. Andy Darnton explained that in the H&D analysis, different models were fitted to the data, to allow a common slope to be obtained for the level of risk for different types of asbestos fibre. Different uncertainty ranges were</p>

	<p>obtained, depending on the model fitted.</p> <p>Taking this point further, the WATCH member observed that given that uncertainties may be inherent in a slope chosen to represent the relationship between exposure level and risk, the absolute error associated with this slope is therefore expected to increase as the slope is increasingly extrapolated beyond the data range. In other words, greater absolute errors would apply for larger extrapolations than for smaller ones. Andy Darnton agreed that the process of extrapolating from the observed data to much lower levels of exposure was inherently fraught with uncertainty. The question of whether the risk estimate ranges derived for low exposures to asbestos adequately reflect the actual uncertainty involved in their derivation was an issue of judgement.</p>
4.3	<p>Discussion on the cover paper: Control banding for certain tasks involving asbestos</p> <p>A WATCH member referred to Table 3 of the cover paper. He asked which estimates of the lifetime risk of mesothelioma and asbestos-related lung cancer related to real data and which to modelled (extrapolated) predictions? Andy Darnton replied that as a general approximation, the estimates in the first two rows of Table 3 were derived directly from occupational epidemiological data, whereas the risk estimates in the 5 rows beneath had been derived using the H&D model.</p>
4.4	<p>Also with reference to Table 3, a WATCH member questioned the selection of an exposure scenario based on a 'starting age for exposure' of 30 years and exposures accrued over 5 years. He asked whether it would be more appropriate to use a younger starting age? He also questioned whether control measures should be based on average risk, or the "reasonable upper end" of the range.</p> <p>He provided an insight into the issue of 'starting age for exposure' by referring to a survey of 1000 workers involved in tasks stripping asbestos-containing textured decorative coatings. The survey data had been used to obtain a distribution for age at which workers started in the industry and the period they remained in service. On this basis, a risk higher than the average could be attributed to workers who start in the industry at early ages and stay in the industry for many years. For example, if the H&D correction factor for starting ages other than 30 is applied to a prediction of risk for a worker who starts in the industry at the age of 16 and works for 25 years, their estimated lifetime risk of developing asbestos-related disease would be between 7 and 10 times greater than that predicted for a worker exposed from the age of 30, for 5 years. Starting age is therefore an important issue and account must be taken of the age at which workers can legally enter occupations where exposures to asbestos may occur.</p>
4.5	<p>Andy Darnton informed WATCH that in the paper presented for this agenda item (WATCH/2009/1) the 'starting age for exposure' of age 30 years and a duration of exposure of 5 years were selected in the analysis to illustrate a control banding approach based on the H&D model. Other starting ages and exposure durations could also be used. The WATCH member re-emphasised the point that in reality, workers as young as 16 could be involved in tasks such as stripping asbestos-containing textured decorative coatings. It was important therefore that risks for different starting-age groups can be accounted for in a control banding approach.</p>
4.6	<p>Another WATCH member pointed out that the risk bands presented in the</p>

	<p>paper related to a 5-year cumulative exposure. It was important to note that exposures at specific times during a person's lifetime could vary considerably. For example, workers involved in certain tasks associated with asbestos might receive relatively high exposures within short periods of time. Little is known about the how such temporal variations in exposure might affect risk.</p>
4.7	<p>Another WATCH member commented that incorporating variable exposure factors (e.g. workers carrying out a range of different tasks over time) in a control banding approach could be problematic, because the control banding approach relates to establishing the level of risk (and therefore the appropriate controls) for specific work-related tasks, divorced to some extent from the consideration of the duration of a task. It would be possible to build into a control banding approach some allowance for exposure duration, for example by assuming reasonable worst-case exposure durations.</p>
4.8	<p>A WATCH member referred to Table 2: "Exposure scenarios and likely associated exposure ranges/bands". He noted that exposure band B 'Intermediate band' related to the exposure scenario of occupants in a building that has asbestos-containing materials in poor condition that are disturbed regulatory and release fibres. In reality, 'occupants of buildings' in this scenario would encompass a range of individuals, for example workers, adult members of the public, or children who have attended a school building since the age of 5. If exposures from occupancy of buildings are a problem, the risks associated with this scenario should be considered in a broad sense, e.g. taking into account exposures from earlier ages.</p>
4.9	<p>With reference to Table 2, another WATCH member agreed that the youngest people exposed in any occupied building must be taken into account when considering exposure scenarios and the likely associated risk range or control band. For example, if school buildings are being considered, the age of schoolchildren should be taken into account and if domestic premises are being considered, babies could be the youngest individuals potentially exposed.</p>
4.10	<p>Spontaneous and environmental origins of mesothelioma</p> <p>In response to a question, the Chairman commented that in previous WATCH discussions of asbestos, data had been presented that suggested that "background" rates of mesothelioma had increased in recent years; one possible inference is that background environmental exposures to asbestos may therefore have increased.</p> <p>Andy Darnton added that the cause(s) was/were not clear for the "spontaneous" occurrence of mesothelioma, currently accounting for about 100 cases of this disease in men and women each year. These cases were apparently not linked to any known exposures to asbestos. He informed members that there is a distinction made between such 'spontaneous' cases of mesothelioma (presumed not to be associated with asbestos) and those that seem to arise due to known or assumed indirect exposure to asbestos (e.g. where it is clear that individuals may have been unknowingly exposed to asbestos from environmental sources).</p>
4.11	<p>A WATCH member asked whether it was possible to quantify spontaneous cases versus cases due to indirect exposure. Andy Darnton replied that some distinction was possible: for example, a third of cases of mesothelioma seen in females each year cannot be linked to any identifiable exposure to asbestos beyond that in background air breathed by the entire population.</p>

4.12	<p>A WATCH member pointed out that if the currently increasing numbers of mesotheliomas was due to a trend of increasing exposures having been experienced at younger ages, this would be reflected by an increase in the number of cases of the disease in the lower age groups of the UK national mortality statistics. There is no evidence that this was case. National statistics collected since the 1980s suggest that the numbers of cases of mesothelioma in lower age groups of the population have declined. In contrast, national mortality statistics over the period 1980 – 2000 (based on 4 surveys, reported every 5 years) indicate that the numbers of deaths from mesothelioma in male teachers were 11, 16, 18 and 27 in 1985, 1990, 1995 and 2000 respectively, suggesting there may be an increasing trend. A similar apparent trend is observed in female nurses: 4, 6, 9 and 13 deaths from mesothelioma were recorded over the same timeframe. The member considered that these mesotheliomas could be due to increasing “environmental” exposures.</p>
4.13	<p>A WATCH member asked whether an increasing trend is observed because cases of the disease in the 1980s, when the statistics were first collected, may have been inadvertently over-looked? Was it feasible that some cases of mesothelioma may have be missed in earlier years of the survey because there was no expectation that this disease would manifest in some groups of the populations and potential cases were erroneously recorded under other causes of mortality? A WATCH member thought that this was unlikely, based on his observations of Scottish mortality rates for pleural cancers. Deaths from pleural cancer in Scotland were at a fairly constant rate from 1930s onwards until a marked increase was observed in the 1970s. Mortality data recorded from the 1970s could be considered to be quite reliable: 2.5 mesothelioma cases were reported in men or women each year, translating to a national UK rate of 25 case /year. The statistics appear to substantiate the theory that there is a rising trend in cases of mesothelioma among the general population.</p>
4.14	<p>Considering control banding concepts for different scenarios involving exposure to asbestos</p> <p>The Chairman asked WATCH whether, as a matter of principle, the idea of developing a control banding approach, that included the notion of different control strategies for different exposure situations, could be achieved. To this end he referred members to Table 5 of the cover paper. The column headed ‘cumulative exposure’ essentially provides the worst-case exposure (in fibres/ml-year) over a five year period for various tasks involving work with asbestos materials, expressed in terms of a fibre air concentration; “exposure” did not take into account the wearing of any personal protective equipment. The adjacent column ‘Risk band’ provides the stringency of control (expressed numerically from 0 to 6) that should be applied to these tasks, on the basis of these exposures. The Chairman asked whether, in this control banding concept, the use of an intervention appropriate to each of these risk bands would, when applied to the corresponding cumulative exposure (in the adjacent column) result in the same ‘outcome’? If so, is it possible to characterise such an ‘outcome’ in terms of the body burden of asbestos fibres?</p> <p>He clarified that this concept mirrored “COSHH Essentials”, in which the idea was to apply control measures in order to achieve a specified target level of exposure.</p>
4.15	<p>A member commented that in his mind Table 5 in the WATCH paper did not</p>

	<p>portray a control banding system. In a control banding approach, different levels of control are defined which, when applied, give a relative reduction in exposure, with perhaps an order of magnitude in difference between each control level. Hence, by increasing the level of control from one level to the next more stringent, the level of exposure will be reduced by an order of magnitude, with the expectation of a commensurate reduction in risk. In a control banding approach such as COSHH Essentials, a specified control strategy is applied to a starting potential exposure level (ie without that level of control) in order to achieve a target level of exposure. The WATCH member considered that this concept was unclear and confused in Table 5. In the control banding approach presented in the HSE publication "Asbestos Essentials", consideration is given to how the potential exposures associated with different scenarios can be reduced to a common low level, e.g. <0.01 f/ml. The WATCH member suggested that a systematic approach was needed to relate the appropriate control measures to a starting potential exposure, in order to achieve the final, target exposure level.</p>
4.16	<p>Another WATCH member interpreted the portrayal of the association between control banding and various work with asbestos material in Table 5 to mean that, for example, as risk band 2 has been assigned to the non-licensed tasks: 'uncontrolled removal' of chrysotile and 'work close to/brush against' amosite, the risk associated with these tasks (and therefore the need to apply exposure control) should be regarded as the same. However, the estimated risks for both these scenarios are similar to that associated with exposures to the exposures to asbestos from background air. This raises the question: 'Should background exposure to asbestos be controlled, and if so, to what extent?'</p>
4.17	<p>A WATCH member cautioned that a control banding approach aims to address how exposures linked to specific work-related tasks can be controlled. He stressed that it was important not to lose sight of the idea behind a control banding approach e.g. 'preventing preventable exposures'. The ultimate purpose of this approach is to give practical guidance to people in the workplace who don't think of risk issues in a scientific way. A control banding approach gives a means by which the relative risks associated with working with asbestos can be ranked and presented in clear, easy guidance that can be understood by workers. A few qualifying statements (e.g. risks for young people) expressed in simple terms could be added to further enhance understanding across workers.</p>
4.18	<p>Garry Burdett referred members to paragraph 17 in the cover paper which indicates that the paper had set out to explore how a control banding approach might be applied, but did not aim to define the process in detail since the committee had not yet established to what extent control measures should be applied to scenarios involving low level exposures to asbestos. He reminded WATCH that during discussions on this topic at the last meeting, members had expressed concern about the precision of the H&D model for predicting risks and so had discussed the idea of a control banding approach for communicating the risks potentially associated with low-level exposures to asbestos. Given the uncertainties associated with the H&D risk estimates, if these risk estimates were considered in the context of appropriate control bands, he did not expect that the predictions would be wrong by any more than one control band at a time, thus offering a reasonably robust approach.</p>
4.19	<p>Andy Darnton highlighted to WATCH that Table 5 in the cover paper had, in simple terms, applied the H&D dose-response relationship to selected</p>

	<p>scenarios. This given, Table 5 could be easily adapted to include different scenarios or factors, such as different ages. Exposures at the background concentration were included for illustrative purposes only - to help contextualise the risks, not to inform thinking about control.</p>
4.20	<p>Assessing cumulative lifetime exposures to asbestos in individuals</p> <p>A WATCH member considered that in his view, the HSE guidance “Asbestos Essentials” did not go far enough in terms of addressing the risks of working with asbestos. Rather than considering the risks associated with specific tasks only, all the tasks that a worker may do over a given time period should be taken into account. Workers likely to work with asbestos over a long period of time may have greater cumulative exposures, and hence greater lifetime risks of developing asbestos-related disease than workers who carry out tasks involving asbestos only occasionally. Potential longer-term workers could be deemed to be a higher risk group, requiring a higher level of protection from the onset of their asbestos-related employment.</p>
4.21	<p>A WATCH member considered that the best use should be made of the control banding concepts discussed in the cover paper. There was a need to give workers sound, practical advice. He pointed out that the current analysis was lacking necessary insights into risk characterisation for the lifetime risk of developing asbestos-related cancers. The lifetime risk profile of individuals is likely to vary and depend on many factors. Hence, based on the information gathered so far, problems will arise when considering the risks, in the context of a control banding framework, for workers who carry out tasks that span a number of different risk bands. Lining-up tasks against individual risks (e.g. in Table 5) is therefore misleading and an over-simplification of reality.</p>
4.22	<p>Taking this point further, a WATCH member suggested an approach in which a cumulative lifetime exposure could be identified for an individual, that should not be exceeded. This is then used to inform exposure control measures for work the individual is likely to carry out. Using a target cumulative lifetime exposure, one could then work backwards to establish to what level exposure from a particular task or source should be limited for that individual as he/she progresses through their working life, such that the target cumulative lifetime exposure is not exceeded.</p>
4.23	<p>The Chairman pointed out to WATCH that there was a clear difference between considering risks to individuals during a prolonged and varied working career, and the control banding approach set out in COSHH Essentials, which was task-based. He also commented that in COSHH Essentials, when dealing with exposure to other established human carcinogens, COSHH Essentials simply refers to seeking specialist advice; no clear instructions are given about how to manage exposure to, and therefore risk posed by proven human carcinogens, because often there is insufficient knowledge of the dose-response characteristics involved. COSHH Essentials avoids addressing the issue of what can be deemed to be acceptable exposures to probable or known human carcinogens. From the committee’s deliberations on asbestos, it appears that the H&D model portrays considerably better dose-response information than exists for many other carcinogens, and could potentially be used to better inform risk assessment and exposure control strategies. Nevertheless, it was apparent from the discussion that establishing criteria against which to make decisions about different strategies for managing the risks from asbestos was going to be a challenge.</p>

4.24	<p>Another WATCH member considered the suggestion of establishing the cumulative exposure over a lifetime for an individual to be good. However, he pointed out that it would be difficult to accurately measure low exposure levels for many tasks. Due to analytical limitations, there will be a 'cut-off' lower limit below which exposures cannot be accurately measured. He added another point, that there is a range of control options available that could be applied to working with asbestos. For example, when drilling materials containing asbestos, workers can wet these to limit the number of fibres that become airborne, and/or they can use personal protection equipment such as an air-fed respiratory mask or, taking exposure control even further, they can use robotic techniques to minimise human exposure. The ultimate choice of a control measure may therefore be influenced by several factors, including the costs involved; pragmatic decisions need to be made.</p>
4.25	<p>A WATCH member suggested that when communicating the issue of risks posed by working with asbestos, such as in Table 5, a short narrative could be included immediately before which could include statements such as: '<i>Working with asbestos can release fibres.... All work with asbestos may be associated with a risk to human health... Your exposure to asbestos over a lifetime is important and influences your risk</i>' etc. The purpose of such a narrative would be to get the message across to workers that any work involving asbestos can potentially expose them to asbestos at levels above the background level and therefore pose a risk to health. Such text could help individuals to identify better the risks they may be facing, in the context of their work patterns.</p>
4.26	<p>Garry Burdett emphasised the importance of effectively communicating the risks posed by low-level exposures to asbestos to workers. To this end, he suggested that the H&D model could be adapted to present the risks as 'risk bands' rather than numerical estimates. These risk bands could be incorporated into a HSE web-based tool designed for use by people working with asbestos. Workers could enter basic information, such as the number of years of work involving asbestos, details of different scenarios and age. Based on this information, the tool might then determine the cumulative exposure for the individual worker and offer a prediction of the magnitude of his/her lifetime risk of developing asbestos-related disease.</p>
4.27	<p>Rob Turner (HSE, Corporate Specialist Division) returned to an earlier contribution referring to licensed and unlicensed work with asbestos. He informed WATCH that the criteria for licensing work involving asbestos-containing materials were very specific. For non-licensed tasks, restrictions apply regarding activities that can and cannot be carried out. For example, some tasks must not be carried out for longer than specified durations. If these tasks are to be carried out for longer than the specified duration, they will be deemed to be licensed tasks and a licence must be applied for via the appropriate process. The existing licensing regime for asbestos therefore accounts for various factors, such as task duration. For scenarios involving potential exposures at the high end of the control banding concept, the appropriate control measure is likely to be licensing (e.g. these could be covered by the existing regime). Controlling exposures at the lower end of the exposure spectrum would be more of an issue. He considered that in reality, workers would be unlikely to go to the HSE website in order to use an on-line tool to calculate their cumulative lifetime risks. Workers tend to think more in terms of the present: what work is needed, how will this be carried out, what is the risk involved, how will I deal with this?</p>

4.28	A WATCH member emphasised the point that there was a need to define the level of risk deemed to be 'acceptable' in order to inform a risk/control banding approach. If an acceptable level of risk can be agreed, the associated level of exposure that can also be deemed to be acceptable can be established for different work tasks.
4.29	Another WATCH member suggested that a key issue was that of how the risks posed by low-level exposures are communicated in the context of specific scenarios (e.g. occupancy of buildings). To this end, more helpful advice could be given to workers in buildings. In the cover paper, risks have been presented in the context of exposures to the three different types of asbestos fibre (amosite, crocidolite and chrysotile). The member asked how realistic it was to expect low-level exposure situations to involve exposure to all three of these fibre types? He asked what is known about the types of fibre that different materials linked to asbestos were likely to contain. This information, if known, could be used inform exposure control measures. For example, if asbestos insulation board contains amosite and not other types of fibre, the relevant risk estimates for amosite can be considered only for these scenarios. Consideration of other risk estimates can be excluded.
4.30	A WATCH member returned to the point of principle, asking if a control banding approach is intended to achieve a personal exposure of less than X or to control risks to a level of Y, a value deemed to be acceptable or tolerable? Using extrapolation of the H&D model, one could establish the exposures that would give the target level of risk. Consideration could then be given to the exposures associated with different operations and the control measures that need to then be applied in order to achieve the exposure commensurate with a target level of risk.
4.31	The Chairman informed members that as a scientific committee, WATCH has the opportunity to make suggestions about how a risk/control banding approach can be effectively implemented. However, WATCH itself could not rule on what are "acceptable" or "tolerable" levels of risk, as these are not wholly scientific judgements. WATCH could chose target levels of risk and consider what control measures might be appropriate in order to achieve them. More generally, the committee could choose a number of different ways in which control banding could operate and set out these options for further discussion at the next meeting.
4.32	Garry Burdett recalled that at the last meeting, members had expressed reservations about using the H&D dose-response relationship to extrapolate with apparent numerical precision to exposure levels far beyond the range of the occupational data and had therefore proposed that a control banding approach could be a viable alternative. He cautioned against using the H&D model to extrapolate by several orders of magnitude to calculate risk values.
4.33	<p>Discussion on publication of WATCH work in risks posed by low-level exposures to asbestos</p> <p>A WATCH member commented that the discussion at the previous WATCH meeting had focused on addressing the issue of absolute risks. In his view, this was still an important issue that was not adequately addressed in a control banding approach. Another member agreed that the committee's focus had digressed in considering control banding approaches and still needed to consider absolute risks. He proposed that the work carried out by the committee and HSE should be published in order to get a wider view on the issue from the academic sector. There was a need for the committee to solidify its position on absolute risks before it could effectively explore the</p>

	<p>relative merits of different control banding options. COSHH essentials currently provide a control banding framework that is applicable, in theory, to the risks posed by exposure to asbestos. Hence, publishing the work would not retard the availability of a control banding approach nor necessarily delay WATCH's further consideration of such an approach. The Chairman commented that publication of the work in the peer-reviewed literature would not necessarily promote a wider debate on the issues; often papers are published inviting comment, but few comments are made. He asked the member whether he would not feel confident about the outcomes of WATCH's work unless this was published? The member replied that publication would give greater credibility to the work carried out to date by WATCH and would therefore be worthwhile. The Chairman proposed that there were two options: 1) pause deliberations over the issue of control banding until after putting WATCH's work out for wider consultation or 2) continue progressing the issue of control banding whilst a publication is drafted and progressed to publication (noting that publication could take up to 12 months from the production of the first draft version). Another WATCH member agreed with the idea of publishing the work as this could bring the views of other academics and experts into the debate.</p>
4.34	<p>Another WATCH member expressed reservations that WATCH was ready to publish its work, as the committee had not reached a clear position on all of the issues it had debated. For example, he considered that the risk associated with background exposures to asbestos was an important and somewhat unresolved issue; how this was presented in a publication was crucial.</p>
4.35	<p>A WATCH member reminded the committee that when Andy Darnton had presented the revised study of the H&D analysis at the June 2008 WATCH meeting, members had suggested that the work should be published. Since the findings of the revised analysis agreed broadly with the original H&D study, publication of the work would validate the H&D analysis and reinforce the widely used statements about risks derived from this model.</p>
4.36	<p>The Chairman affirmed with WATCH that the committee wanted to continue deliberating over the issue of control banding approaches for risks posed by low-level exposures to asbestos, whilst a paper is prepared for publication.</p> <p>Andy Darnton reminded WATCH that the reason that attention had turned to a control banding approach stemmed from concerns members had expressed about the uncertainty associated with risk estimates derived from the H&D model. He highlighted the point that if each control band spans an order of magnitude in terms of target exposure range or risk level, then when the H&D risk estimates are considered in the context of appropriate control bands, one would not expect estimates to be wrong by more than one control band.</p>
4.37	<p>A WATCH member agreed with the idea of publishing but considered that aim of publication should be to inform on the work WATCH had been conducting on the issue, rather than to invite comments via a consultation exercise; other members agreed.</p>
4.38	<p>In summarising the discussion so far, the Chairman noted that the committee considered that the position on risks posed by low-level exposures to asbestos it had reached at the October 2008 WATCH meeting should be published as a peer-reviewed paper. He noted also that the committee considered that a control banding approach should be pursued. Since the idea for progressing the issue by using a control banding approach</p>

	<p>had come from the committee, he wondered if ideas on this should now be taken further forward via direct input from members, rather than HSE officials suggesting approaches for WATCH's consideration at the next meeting? To this end, the Chairman invited views from the committee on whether a small working group of WATCH members and officials from HSE and HSL be convened to develop ideas?</p>
4.39	<p>Several members raised concern about the way in which ideas were being presented, with the goal being described as “control banding” or “risk banding” at different times. With reference to the conclusion from the last meeting (October 2008) a WATCH member pointed out that, given the consensus, he did not understand why some members had were now expressing reservations on the progression of this work and taking issue with the associated terminologies. This member said that the ultimate purpose of control banding was to achieve a given level of risk. He considered that ‘risk banding’ and ‘control banding’ were therefore conceptually the same thing. Another WATCH member reiterated that an agreed level of “achievable” or “acceptable” risk was needed in which the concept of control banding could be further developed; defining the target level(s) of risk should be the initial consideration.</p>
4.40	<p>A WATCH member offered to prepare a preliminary paper in time for the next meeting in June, exploring what could be deemed to be ‘acceptable risks’ in the context of this issue. The WATCH member agreed to prepare this paper by the end of March. The Chairman thanked the member for this very helpful offer, which provides the basis for making progress in advance of the next meeting. He also asked other members to indicate to the WATCH Secretary if they were able to take an active part in the further development of this work between now and the June meeting.</p>
4.41	<p>The Chairman thanked members for their comments and brought discussion on the item to a close. He noted that members had raised a number of important points:</p> <ul style="list-style-type: none"> (i) Whether or not a control banding approach should be based on average exposures/risks, or on the reasonable upper-end of ranges? (ii) Any control banding guidance should include a narrative to explain to workers in clear and simple terms the risks posed by working with asbestos. (iii) The need and capacity for an approach to incorporate the determination of risks to the individual, taking into account starting ages of exposures and changing work patterns within a working career. <p>The Chairman confirmed with WATCH that, in concluding its deliberation on this item, members had agreed the following key points:</p> <ul style="list-style-type: none"> (i) Work carried out by the committee on the issue of risks of mesothelioma and lung posed by low-level exposure to different types of asbestos fibre, progressed up to and including the October 2008 WATCH meeting (including the revised analysis of H&D model) should be published in a peer-review journal. (ii) The committee was in favour of taking the concept of control-banding for tasks involving exposures to asbestos further forward. The next stage will be to examine a preliminary paper

	to be prepared by a WATCH member in time for the June WATCH meeting.
5	Update on activities relating to past WATCH papers (a) Azo dye penetrants
5.1	The Chairman opened this item by reminding WATCH that at the February 2008 meeting the committee had considered the potential cancer hazard and risk posed by the use of azo dye penetrants such as CI Solvent Red 164, a penetrant dye used in the detection of cracks in metal components (WATCH/2008/1). WATCH had been updated on activities and developments at the October 2008 WATCH meeting (WATCH/2008/2). He invited John McAlinden (HSE, Chemicals Risk management Unit) to give the committee a brief update on further developments. However, first a more general issue relating to WATCH's work on carcinogens had arisen and he asked John to cover this matter first.
5.2	<p>General issue on carcinogens and WATCH</p> <p>John McAlinden reminded the committee that at the November 2006 meeting, HSE had approached WATCH with a proposal for prioritising chemical carcinogens with information gaps (e.g. insufficient details of the supply chain), within the Cancer Project of the Disease Reduction Programme (DRP). The committee had not agreed with the proposed approach, considering it to be too simplistic, and had requested that HSE refine its thinking on this theme. Taking these comments on board, HSE revised the proposed approach for prioritising carcinogens for further work, which was agreed at a DRP workshop held in the summer of 2007.</p> <p>He alerted WATCH to a paper due to be published in the Journal of Occupational Medicine in which it was quoted that WATCH had adopted the initial approach proposed by HSE. This was not true; WATCH agreed with John McAlinden's proposed approach to trying to get the impending publication changed to reflect the true picture.</p>
5.3	<p>Use of CI Solvent Red 164 – Brief update</p> <p>John McAlinden gave a short presentation to WATCH on the use of CI Solvent Red 164, updating members on developments since the October 2008 WATCH meeting (he also distributed a briefing report to members)</p> <p>WATCH/2008/2 issue</p> <p>John McAlinden reminded members of the conclusions the committee had reached following its review of this issue at the February 2008 meeting:</p> <ul style="list-style-type: none"> (i) There is a paucity of hazard and exposure data (ii) CI Solvent Red 164 should be treated as a suspect carcinogen (iii) There is a need to gather exposure data (iv) The issues require more attention from industry (v) Insufficient information is available to recommend alternatives <p>Hazard and exposure data: Visits to formulator and user sites</p> <p>WATCH had considered there to be a paucity of hazard and exposure data on CI Solvent Red 164 as a penetrant dye in the detection of cracks in metal components. He informed the committee that HSE was not aware of any</p>

	<p>new hazard or exposure data generated by industry. HSE has visited the 4 <i>formulators</i> discussed in WATCH/2008/1 and all agreed to submit workers' urine samples for analysis. Results of urine sample analysis were now available for four UK formulators (a fifth UK formulator had ceased to trade).</p> <p>Visits to potential <i>user</i> sites (e.g. founding, forging, welding and in-service inspection) began in February 2009. The process of identifying and then visiting potential user sites and collecting relevant data has been slow due to the general lack of knowledge across these sites of the nature of the chemicals that are being used in operating processes.</p> <p>On a positive note, HSE has established partnerships with the independent 'Non Destructive Testing' (NDT) consultant examiners, via the professional association for NDT, in order to gather exposure data across regular users of the liquid penetrants. HSE was expecting to recruit 50 independent examiners to visit workplaces, collect urine samples and gather data and was planning to 'shadow' 5 consultants during this process. It was envisaged that the data would be collected quickly such that a full set of exposure data would be obtained for all the visited sites by June 2009.</p> <p>Exposure control approach</p> <p>HSE has issued a guidance document (SIM 03/2008/10) for industry users and both HSE and local authority inspectors on the precautions to be taken when working with azo dyes.</p> <p>Substitutes</p> <p>HSE has approached a member of WATCH to facilitate a meeting between HSE and an industry expert on azo dyes.</p> <p>HSE has received no further information from industry on potential substitutes.</p> <p>Results of biological monitoring surveys</p> <p>John McAlinden referred members to biological monitoring results from quantitative assessment of worker exposures in the formulation of liquid dye penetrants containing the azo compound CI Solvent Red 164; the analytes studied were two potential metabolites of concern, aniline and o-toluidine (Appendix 1 of the briefing paper). Data were presented for 16 workers across four Formulators (A, B, C and D). For Formulators A, C and D, most of the results were found to be below the reference background levels (for an unexposed population) of <10 µmol/mol creatinine and <5 µmol/mol creatinine for aniline and o-toluidine respectively. Some repeat sampling was required to check for possible errors in analysing one or two samples from Formulator C. For Formulator B all results were 'non-detected' – the assay techniques used would have detected levels of o-toluidine in urine samples at or near the background level in the general population.</p>
5.4	<p>General discussion</p> <p>The Chairman thanked John McAlinden for giving an update to the committee and opened the item for general discussion.</p>
5.5	<p>With reference to Appendix 1 of the briefing paper, a WATCH member observed that the post-shift level of urinary aniline for some workers was below their pre-shift level. John McAlinden replied that all the levels were within the background range and fluctuations within this range were believed to arise naturally. John Cocker (Biological Monitoring Unit, HSL) added that the fluctuations in the levels observed could be regarded as 'noise' obtained</p>

	during measurement; the inference was that significant exposures had not occurred.
5.6	A WATCH member asked whether CI Solvent Red 164 had been pre-registered under REACH? John McAlinden replied that he had had no reason to explore this. The Chairman informed the committee that as the UK competent authority (CA) for REACH, HSE could access information sources on pre-registered substances. He actioned the UK REACH CA component of HSE to check this.
5.7	A WATCH member asked what are the limits of detection for the two potential metabolites of interest? John Cocker replied that these are close to the background levels.
5.8	Whilst acknowledging that the findings of biological monitoring surveys of formulators had been reassuring, a WATCH member expressed concern over the potential for exposure in users of azo dyes, for example through the use of aerosols. In his experience it was rare to find workers wearing appropriate personal protective equipment (PPE). Work was often carried in confined or semi-confined spaces and involved fabrication shops of different sizes. The level of worker protection associated with these types of premises can be inadequate. The member commented from knowledge of the supply of dyes that the actual dye itself was not the critical issue in the minds of penetrant dye formulators, because the solvents and other components included in the formulation, along with the dye, impart to it the property of crack detection. If a particular dye poses a possible risk to health, there could be a clear and relatively easy case for substituting its use with another dye. He considered that the exposure to CI Solvent Red 164 through the use of aerosols in confined spaces was a significant problem in terms of securing adequate control.
5.9	The Chairman thanked members for their comments and brought discussions on the item to a close. He noted that: <ul style="list-style-type: none"> (i) HSE anticipated having further data from its visits to user site in time for the June 2009 WATCH meeting, along with further insights on the potential for substitution. (ii) HSE agreed to check the status of CI Solvent Red 164 regarding its pre-registration under REACH.
5.10	ACTION : HSE to check whether or not CI Solvent Red 164 has been pre-registered under REACH.
6	Update on activities relating to past WATCH papers (b) Metal working fluids
6.1	The Chairman opened the item by reminding members that following WATCH's deliberations at the June 2007 meeting on the potential health risks caused by exposure to metal-working fluids (MWF) arising following investigations at Powertrain Ltd in Longbridge, Birmingham, HSE had established a three-year programme of work to explore this issue further. He invited Gareth Evans (Health Exposures Unit, HSL) and Chris Barber (Centre for Workplace Health, HSL) to provide the committee with an update on progress on the MWF programme of work.
6.2	HSE programme of work on Metal Working Fluids (MWF) <i>Programme, progress and milestones</i> Gareth Evans informed WATCH that the purpose of the presentation was to

provide the committee with a brief update on the different phases of the programme, highlighting some of the important issues that had emerged whilst also alerting members that for some of the projects, a wider consultation on the issues was now needed. The programme had started in September 2008. The programme was being conducted in two phases. Phase 1 consisted of 4 sub-studies :

- 1.1 Literature review of outbreaks of respiratory illness caused by MWF
- 1.2 Clinical case definitions for Extrinsic Allergic Alveolitis (EAA) caused by MWF
- 1.3 Simulation of microbial growth in conventional and Bioconcept MWF
- 1.4 Inventory of constituents of MWF formulations.

Phase 2 involved the planning for incident investigations of respiratory disease.

Literature review of outbreaks of respiratory illness caused by MWF (Sub-study 1.1)

Gareth Evans reminded members that the idea of conducting a literature review had emerged during discussions at the June 2007 meeting. Questions had been raised as to why very few cases of disease had been seen in mainland Europe despite the widespread use of MWF, when numerous cases of disease in UK and USA had been linked to the same operational processes. One of the aims of the literature review was to identify the approaches other investigations had taken towards incidents of disease outbreaks. An extensive review was carried out of published literature and government reports but there are plans to broaden the search, given that few published incident investigation reports have been found. Although around 1300 published papers were initially identified as being of some potential relevance, only 30 papers have been identified which focus specifically on the investigation of outbreak incidents.

Simulation of microbial growth in conventional and Bioconcept MWFs (Sub-study 1.3)

The programme of work on MWF includes a laboratory-based study to simulate microbial growth in conventional and Bioconcept MWF. There is an increasing trend within the MWF industry to use Bioconcept MWF. Studies have commenced and results are now being obtained. The study includes investigations of best-case and worst- case scenarios in term of microbial growth.

Constituents of MWF formulations (Sub-study 4)

Gareth Evans referred members to the paper attached to the item which summarised progress to date on Sub-study 4, prepared by Dr. Brian Crook (Health Exposures Unit, HSL). The objective of this sub-study is to compile an inventory of the key chemical ingredients of MWF and relevant human data about potentially hazardous chemicals for HSE. At the HSE/HSL MWF Forum meeting in December 2008, contact was established with Paul Whitehead, Chairman of the UK Lubricants Association Product Stewardship Group who gave a presentation on the subject of MWF formulations based on his extensive knowledge of the industry. In his paper, Dr. Crook invited WATCH to consider how potential chemical respiratory hazards used in MWF can be identified in the context of this sub-study and indicated that

Paul Whitehead would be willing to give a presentation to WATCH on this theme.

Clinical case definitions for EAA caused by MWF (Sub-study 2)

Chris Barber reported to WATCH on progress made on Sub-study 2. The aim of this sub-study is to examine case definitions for respiratory ill-health linked to exposures to MWF, to establish diagnostic criteria and the certainty with which these can be applied. A large number of papers relating to MWF incident investigation were identified during the literature review (Sub-study 1.1). These papers were looked at to identify the criteria that incident investigators had used when examining cases of ill-health. On the basis of this assessment, a number of different definitions were presented to GORDS (Group of Occupational Respiratory Disease Specialists) for comment. It became apparent that there is currently no consistent, British approved standard for defining cases of EAA, with respect to exposures to MWF or otherwise. Moreover, EAA linked to MWF tends to have more varied symptoms than in cases arising from other causes.

Investigations at the Powertrain Ltd plant used the case definition for EAA based on that reported by a study from USA by Fox *et al* (1999)¹. Seven diagnostic criteria were used as follows, with one point being assigned for each criterion reached:

- (i) Clinician diagnosis of probable or definite EAA.
- (ii) Onset of at least two pulmonary symptoms (cough, wheeze, chest tightness, shortness of breath) and one systemic symptom (fever, weight loss) since 1 January 2003.
- (iii) Work relatedness of symptoms: symptoms worse at work and better on days off work, and recurrence of symptoms after at least 3 days away from work.
- (iv) Restrictive pattern on spirometry: forced vital capacity (FVC) < 80% predicted and forced expiratory volume in 1 s (FEV1)/FVC 70%.
- (v) Pulmonary diffusing capacity [gas transfer for carbon monoxide (TLCO)] < 80% predicted.
- (vi) Chest X-ray or computerised tomography showing an interstitial, reticulonodular or mosaic pattern.
- (vii) Biopsy evidence of non-caseating granulomas on biopsy or lymphocytosis on bronchoalveolar lavage.

On the basis of these criteria, case definitions had been applied to all workers at the Powertrain plant with a possible, probable or definite clinical diagnosis of EAA. It is not clear however, how the diagnostic criteria used to inform the Powertrain investigation had been established. One study attempts to develop a less invasive method than biopsy, but this technique is not widely available in the UK.

Overall, GORDS has not established a definitive set of diagnostic criteria for EAA. In order to do this, a comparative study would be needed of different diagnostic criteria to determine what combination of criteria most effectively identifies EAA. Data from a large database of records for 400 employees at

¹ Fox J, Anderson H, Moen T, Gruetzmacher G, Hanrahan L, Fink J. (1999) Metal working fluid-associated hypersensitivity pneumonitis: an outbreak investigation and case-control study. *Am J Ind Med* 35:58–67.

	<p>the Powertrain Ltd plant, set up at the time of the investigation, could be used to explore diagnostic criteria further. Taking biopsy-confirmed cases as the 'gold standard' method, the performance of other diagnostic tests could be investigated using statistical and modelling techniques.</p>
6.3	<p>General discussion</p> <p>The Chairman thanked Gareth Evans and Chris Barber for updating WATCH on the HSE programme of work on MWF. He asked members if they had any questions.</p>
6.4	<p>A WATCH member considered that the suggested study of the workers database from Powertrain Ltd, to inform on the best diagnostic criteria for EAA, would be useful.</p>
6.5	<p>A WATCH member asked if, when looking through the reports of case definitions, any commonality in diagnostic approach was observed across these reports? Taking this point further, he asked what emerges from the reports in terms of how diagnostic judgements were actually made, for example was the outcome of a lung biopsy always considered or were other criteria also applied? Could modelling be applied to clarify the diagnosis if, for example, an individual exhibited any three or four features from a standard set of five?</p> <p>Chris Barber provided an example of the experiences from a local, small-scale outbreak of EAA. Although a lung biopsy had been used to confirm diagnosis in the first, 'index' case of disease at the site, this line of enquiry had been pursued without the knowledge of a linkage to an outbreak. No invasive tests had been used to diagnose disease in any of the subsequent cases at the site. Diagnosis was based on typical radiological features as identified on a Computerised Tomography (CT) scan and abnormal lung function that improved when workers were removed from the working environment. Generally this approach is acceptable as a clinical case definition when dealing with outbreaks, but may not be useful when considering isolated cases.</p> <p>For an individual, if a number of criteria were shown - abnormal lung function, raised blood inflammatory markers, noisy chest in combination with a typical CT scan - in an outbreak situation, this would be regarded as a definite case. There would be no need from any invasive testing. If a typical CT scan is not obtained for workers, their symptoms would need to be looked at in more detail.</p> <p>Scientifically, this approach raises the questions: Is this approach valid? How many cases would potentially be missed by a non-invasive approach? This has been explored further. In a study of a small outbreak in the US, questionnaires used for alveolitis were used on 16 biopsy-proven cases, to see if any would have been missed on the basis on non-invasive criteria. The question was asked: what level of questionnaire symptoms would one need to accept so as not to miss any of the confirmed cases of disease? Six different symptoms were considered in the questionnaire, to which the positive responses were either 'sometimes' or 'usually'. The study indicated that in order to identify all the confirmed cases of disease, one needed to accept all 6 symptoms being marked as at least occurring 'sometimes'.</p> <p>The accurate determination of cases of EAA is additionally problematic since there are many diseases with common symptoms. Few workers exhibit all of the recognised symptoms of EAA; for most workers diagnosing the disease</p>

	is not clear-cut.
6.7	Gareth Evans emphasised to WATCH that determining the effects associated with exposure to MWF presented a complex and challenging problem. Several respiratory diseases (e.g. EAA and bronchiolitis obliterans), share common symptoms, making an accurate diagnosis difficult. Furthermore, many people experience respiratory symptoms of one kind or another, but may not readily associate these as being work-related.
6.8	The Chairman asked Gareth Evans when he expected further results from the programme to be available? Gareth Evans replied that further results were expected around May or June. Hence he could provide WATCH with an update at the Autumn 2009 WATCH meeting.
6.9	The Chairman thanked members for their comments and brought the item to a close. He confirmed with WATCH that a further update on progress on the HSE programme of work would be given at the Autumn 2009 WATCH meeting, and an invitation may be made to Paul Whitehead, Chairman of the UK Lubricants Association Product Stewardship Group, to present to WATCH on the topic of constituents of MWF formulations.
7	Welding fume and chronic obstructive pulmonary disease (COPD)
7.1	<p>The Chairman opened this item by reminding the committee that this topic has been discussed at the November 2008 WATCH meeting but could not be progressed because, in producing the associated paper, HSE had confused the issue in a way that could not be remedied at the meeting; therefore it was re-scheduled for discussion at this meeting. He reminded WATCH that the issue under consideration was to clarify the position on the evidence that exposure to welding fume might or might not cause COPD and invited the committee to consider the cover paper (WATCH/2002/2). The aim was for WATCH to form an opinion, to be conveyed to ACTS. He welcomed Helen Smith (DRP Respiratory Disease Project, HSE).</p> <p>In considering this issue, the Chairman referred WATCH members to text appearing in bold in paragraphs 10 and 11 of the cover paper. This attempted to portray the HSE view of the strength of the association between exposure to welding fume and COPD. He also referred members to supporting evidence:</p> <ul style="list-style-type: none"> (i) Annexe 1 – COPD – Chronic Bronchitis and Emphysema. A report prepared by the Industrial Injuries Advisory Council (IIAC). (ii) Annexe 2 – A table giving the prevalence ratios for COPD for the top ten Standard Occupational Classification, SOC [1990 minor (2 digit)] groups based on the HSE analysis of Health Survey for England data. <p>He opened the item for general discussion.</p>
7.2	A WATCH member questioned the basis for the statement in paragraph 11 of the cover paper <i>“HSE remains concerned about the risk of COPD and other lung disease in welders given the known toxicity of a number of fumes that can arise from this work activity hence its continuing action under the Disease Reduction Programme.”</i> He asked what evidence there was for the toxicity of fumes arising from welding. The Chairman replied that this statement was based on the knowledge that welding fumes are known to contain metals and irritant gases (e.g. ozone and nitrogen oxides) that, in sufficiently high concentrations, are known to be able to produce adverse

	<p>effects on the respiratory tract. The WATCH member suggested that the respiratory tract effects likely to be induced by these constituents of welding fumes would differ from the characteristics underlying COPD. The Chairman clarified that the intention was to say that welding fumes, by virtue of their chemical constituents, present a potential threat to the respiratory system and therefore warrant consideration under the Respiratory Disease element of the DRP. There is a risk of damage to respiratory health associated with inadequately controlled exposures to welding fumes, although the damage that may arise may not manifest itself specifically as COPD.</p>
7.3	<p>A WATCH member pointed out that as HSE's position statement in paragraph 11 of the cover paper discusses the risk of COPD in the context of welding fumes. The wording implies that there is evidence of a causal link with COPD and this is the basis for concern. He asked if HSE considered there to be such a link.</p>
7.4	<p>Helen Smith informed WATCH that, in the context of establishing a causal link as the basis of a claim for compensation, the Industrial Injuries Advisory Council (IIAC) required evidence that welders can have a greater than 2-fold increased risk of developing disabling loss of lung function characteristic of COPD. IIAC did not find this evidence in its investigations, meaning that welding did not meet the criteria for prescription. From HSE's perspective, this does not necessarily mean that there is no evidence that welding can be associated with COPD, but simply that the IIAC "2-fold increase" criterion is not met. HSE considers that there are a range of substances in welding fumes that are potentially harmful to respiratory health, a cause for concern.</p>
7.5	<p>In light of members comments, the Chairman asked WATCH whether the statement in paragraph 11: '<i>HSE remains concerned about the risk of COPD....</i>' should be re-phrased as '<i>HSE remains concerned about the <u>potential</u> risk of COPD....</i>'?</p>
7.6	<p>A WATCH member referred to the IIAC report on COPD presented in Annexe 1 to the item. Page 17, paragraph 51 informs that a decline in FEV₁ had been observed in workers exposed to welding fumes when compared with other shipyard workers not exposed to welding fumes. He considered that this may offer some support to HSE's position statement portrayed in paragraph 11 of the cover paper. Another WATCH member disagreed; information in paragraph 51 indicates that an investigation of whether the frequency of COPD is increased in welders gave conflicting results and did not suggest that there was a causal link. He added that in paragraph 52, a study of welders in Royal Navy dockyards did not find evidence for an adverse effect on lung function in welders.</p>
7.7	<p>Rob Turner offered WATCH some insights into how this item had been brought to the committee. HSE had commenced a welding fume project under the DRP in 2005. In 2007, HSE was challenged by industry on the justification for this project and was asked to provide the evidence for a causal link between welding fumes and COPD. When this came to the attention of ACTS in November 2007, the position then adopted by HSE was described to ACTS by the ACTS Secretary as "there is no evidence to link COPD to welding". ACTS had challenged this and asked HSE to engage WATCH to examine HSE's position and the supporting evidence for it. At the June 2008 WATCH meeting, HSE told WATCH that the HSE position had been misrepresented to ACTS and HSE undertook to provide a clearer position statement to WATCH at the November 2008 WATCH meeting. At the November WATCH meeting, members expressed concern that HSE's</p>

	<p>position was still not clear (see above) and hence the text at paragraphs 10 and 11 of the cover paper was prepared. HSE's position is that the potential for welding fumes to cause ill-health is a cause for concern, in spite of IIAC conclusions about the lack of evidence for meeting the criteria for prescribing for compensation purposes; and therefore under the Respiratory Disease element of DRP, continuing action to secure adequate control of exposure to welding fumes is warranted.</p>
7.8	<p>A WATCH member requested clarification of the statistics on the portion of welders with respiratory disease presented in paragraph 5 (c) of the cover paper, relating to the statements "...welding was one of four occupations that contributed to close on 60% of all cases of bronchitis/emphysema over the periods 1989-2003" , ".....The actual contributions associated with occupation were identified aswelders (16%).....' and "..... welding fume was considered to be the most important substance attributed to cases of bronchitis/emphysema over the same period contributing 31% of the cases...". The WATCH member pointed out that the absolute numbers would have been useful in interpreting this analysis.</p> <p>Another WATCH member agreed that the presentation of information in paragraph 5 (c) as percentages rather than absolute numbers was confusing.</p>
7.9	<p>Helen Smith clarified that of all the cases of work-related bronchitis and emphysema diagnosed between 1989 and 2003, approx 60% were attributed to four occupational groups: coal miners, dock workers, welders and petroleum workers with each occupation accounting for 22%, 17%, 16% and 2% of all the cases of bronchitis and emphysema respectively.</p> <p>As background, Helen Smith informed WATCH that these statistics had been included in planning documents going back to when HSE first planned the Respiratory Disease element of DRP. Although these figures were numerically correct, they had subsequently been incorrectly interpreted in terms of the emphasis of COPD associated with welding.</p>
7.10	<p>A WATCH member commented that based on these statistics, the prevalence of COPD in dockworkers appeared to be high. The basis for this should be investigated further. Helen Smith agreed that this should be looked at.</p>
7.11	<p>A WATCH member asked when the Labour Force Survey (LFS) referred to under paragraph 5 (b) was carried out. Andy Darnton replied that the LFS is done on a continually ongoing basis, but the statistics presented are from 2005 (when the associated DRP planning document was produced).</p>
7.12	<p>Based on his knowledge of the Surveillance of Work-related and Occupational Respiratory Disease surveillance scheme (SWORD), Chris Barber informed WATCH that there is a common view across chest physicians that COPD is predominantly caused by smoking. Under-reporting of occupationally-caused COPD is likely because cases that are truly work-related are difficult to distinguish from cases due to smoking. Definite cases of occupational COPD are found in non-smoking workers who show a decline in their lung function earlier than expected for their age.</p>
7.13	<p>Reporting WATCH's opinion on HSE's position statement to ACTS</p> <p>The Chairman referred WATCH back to HSE's position on welding and COPD portrayed in paragraph 11 of the cover paper and asked members to consider how they would like to convey an opinion on this issue back to ACTS. Based on the committee's deliberations over the issue so far, he</p>

	<p>noted that members had expressed the view that the statement made in the penultimate sentence in paragraph 11 <i><u>"In summary, HSE's position is that whilst current evidence is suggestive, it is not sufficient to establish a causal link between exposure to welding fume and COPD"</u></i> was appropriate, but the last sentence in paragraph 11 could be supplemented with additional wording or re-worded, for example <i>"Nevertheless, there is sufficient concern about the potential for welding fumes to effect the respiratory tract and, given the numbers of welders (or the amount of welding activity), this merits action to secure improved control of their conditions"</i></p>
7.14	<p>A WATCH member suggested that reference specifically to COPD should be omitted from HSE's position statement in paragraph 11.</p>
7.15	<p>The Chairman sought members' views on the suggestion that the last sentence of paragraph 11 be re-worded to state: <i>"HSE remains concerned that there might be a risk of lung disease, including COPD in welders, hence its continuing action under the DRP"</i>.</p>
7.16	<p>A WATCH member commented that he was not familiar with the occupational health and safety issues for welders but, based on the discussions so far and the supporting body of information, he was not sure there was sufficient evidence to warrant continuation of action on this issue under the DRP. He did not feel sufficiently informed about the evidence base. The Chairman acknowledged that WATCH had not been presented with a broad package of papers to inform their deliberations on this topic and hence he could understand the member's comment. In light of this, he agreed with WATCH that the committee would not comment on the last sentence of paragraph 11 regarding the justification for the continuation of action on welding fumes under the DRP, as the committee had not comprehensively examined the evidence.</p>
7.17	<p>A WATCH member highlighted that IIAC's approach to the issue stemmed from its role as a body that decided on an individual's entitlement to compensation in lieu of injuries to health received at work. HSE has a different role to IIAC: it protects people against risks to health or safety arising out of work activities. It is therefore appropriate that HSE conveys the message that exposures to welding fumes may be a cause for concern in terms of occupational health, without necessarily being specific about the potential health outcomes (e.g. COPD).</p>
7.18	<p>The Chairman added his perspective that there is a vast body of literature on the health consequences of exposure to welding fumes. WATCH had not been asked to comprehensively review the scientific evidence underlying this issue because of the sheer size of the task. IIAC, in its review of the prescription of COPD, had examined a limited number of studies that concentrated specifically on COPD. HSE, having considered the issue more widely, is confident that welding fumes pose threats to health, but there is no requirement for WATCH to endorse this view, as the committee has not been tasked with undertaking such a review.</p>
7.19	<p>The Chairman thanked WATCH members for their comments and brought discussion on the item to a close. He confirmed with WATCH that the committee considered it appropriate that HSE adopts the position <i><u>"that whilst current evidence is suggestive, it is not sufficient to establish a causal link between exposure to welding fume and COPD"</u></i>, as in paragraph 11 of the cover paper. The WATCH Secretariat would convey this opinion to ACTS. It was also agreed that the committee had not formulated a view on other parts of the text in the</p>

	cover paper.
7.20	ACTION : WATCH Secretariat to convey WATCH's opinion to ACTS.
8	General committee issues
8.1	<p>The Chairman opened this item by inviting WATCH to consider two general committee issues that had been raised by WATCH members:</p> <ul style="list-style-type: none"> a. The potential for WATCH contribution to consultation processes (for example, papers produced by EU Directorate Generals undergoing public consultation) b. ACTS plan of work for 2009/10. <p>He invited the two WATCH members to present each of these issues to the committee.</p>
8.2	<p>(a) The potential for WATCH contribution to consultation processes</p> <p>A WATCH member gave the committee a brief introductory presentation on issues, examples and questions related to the contribution WATCH could make to such consultation processes. The issue before WATCH was to consider whether or not the committee should participate in consultation processes or comment on the work of other organisations relevant to its Terms of Reference. He informed the committee that this issue had emerged in the context of an on-going review within HSE of the future role of committees such as ACTS and WATCH. In discussions at the last ACTS meeting, it was highlighted that WATCH was the only committee or working group under the umbrella of ACTS which meets regularly. In this context, it was asked whether roles formerly held by other groups under ACTS, such as WEELS (Working group on European occupational Exposure Limits), eg in reviewing summary documents prepared by EU DG Employment's Scientific Committee on Occupational Exposure Limits (SCOEL), when they are out for public consultation, should now fall to WATCH.</p> <p>He provided the committee with another type of example of consultation exercises to which WATCH may consider responding: '<i>Draft opinion on the use of the threshold of toxicological concern (TTC) approach for the safety assessment of chemicals</i>' prepared by the EU Scientific Committee on Consumer Products (SCCP), Scientific Committee on Health and Environmental Risks (SCHER) and Scientific Committee on Emerging and Newly Identified Health Risks (SCEIHR).</p> <p>To stimulate general discussion on the topic, he posed the questions:</p> <ul style="list-style-type: none"> (i) Should WATCH review and comment on such consultation documents? if so: (ii) How will such issues be identified and presented for WATCH consideration? and (iii) How will WATCH deal with such issues when the time frame for comment is too short to permit discussion at a normal scheduled meeting?
8.3	The Chairman thanked the WATCH member for the presentation and opened the item for general discussion.
8.4	A WATCH member considered that the committee might be well placed to comment on summary documents prepared by SCOEL.

8.5	A WATCH member also serving on SCOEL reminded the committee about how draft SCOEL Summary Documents are reviewed. The draft documents are sent out for a 6-month public consultation period. Comments are often received from the UK (via HSE), some other member state regulatory authorities, industry and individuals. Following the consultation, the draft criteria documents are reconsidered by SCOEL and, if it is judged to be necessary, amended to take account of comments received.
8.6	Another member reminded WATCH that the committee had discussed the idea of reviewing SCOEL Summary Documents at previous meetings and had decided against adopting this activity; the task of providing a comprehensive review the toxicological evidence base for individual substances, in order to judge the appropriateness of a summarised version of that data, is beyond the committee's capability. However, the member commented that the committee may wish to consider responding to consultations on more generic topics in chemical risk assessment, such as the 'threshold of toxicological concern' presented in the SCCP/ SCHER/ SCEIHR document, since this presented an alternative approach to setting a type of exposure limit.
8.7	A WATCH member raised the issue of how consultation initiatives would be identified and brought to the attention of the committee. In his view, either individual WATCH members could identify consultation documents and bring them to the committee's attention or HSE could draw the committee's attention to pertinent consultation initiatives. On this basis, members could decide whether the committee should prepare a collective response, or whether members should respond individually.
8.8	Whilst acknowledging that there were only three committee meetings annually and this may present a problem in terms of timings, a WATCH member suggested that the committee should nevertheless attempt the process of responding to a number of consultation documents as a trial exercise.
8.9	Another WATCH member expressed reservations about the idea of WATCH responding to consultation initiatives. If WATCH responded to consultations on generic topics related to the health risks posed by chemicals, this might overlap with work already being done by other UK government advisory committees, e.g. the Committee on Toxicity (COT). In his view, consultations relating to issues of chemicals and occupational health, such as SCOEL Summary Documents, might align better with WATCH's remit.
8.10	The Chairman advised WATCH that a clear mandate was needed in order that the committee can engage on this work. WATCH does not have the remit to set its own agenda. This proposal would therefore need to be agreed with ACTS as appropriate for WATCH to undertake.
8.11	Regarding SCOEL Summary Documents, a WATCH member expressed the view that he would not be comfortable commenting on these documents without having scrutinised the supporting scientific evidence. He envisaged that a thorough review of SCOEL Summary Documents could therefore be very time-consuming.
8.12	A WATCH member pointed out to WATCH that one of the motivations associated with the proposal to undertake this work was the potential it created for better sharing information across the committee members. Even if members chose not to participate in a response, they could benefit professionally from awareness of an ongoing consultation and the

	associated issues.
8.13	A WATCH member suggested that documents or consultations that may emerge from the Risk Assessment Committee (RAC) established for REACH could be relevant to consideration by WATCH
8.14	The WATCH Secretary raised the question of, if the WATCH Secretary fulfilled the role of collating comments from members relating to a consultation document, how any differences in opinion/conflicts of view between different members would be resolved?
8.15	<p>No further comments were made. The Chairman summarised the position that members were supportive of the principle of WATCH responding to consultations and would be willing to trial the envisaged process, say over a period of 6 months. ACTS would need to be consulted on the appropriateness of WATCH operating in this manner. The WATCH Secretariat would identify some examples of consultation documents for WATCH to reflect on further at the next committee meeting. Subject to approval by ACTS, WATCH would then embark on a trial run.</p> <p>He then moved discussion on to the next general committee issue: ACTS plan of work for 2009/10</p>
8.16	<p>ACTS plan of work for 2009/10.</p> <p>A WATCH member, also serving on ACTS, gave the committee a brief overview of ongoing activity to establish the ACTS plan of work for 2009/10 and beyond. He informed the committee that the recent merger of HSE and HSC and subsequent interactions with the new HSE Board had caused ACTS to re-assess its position as the government's advisory committee on toxic substances. To this end, a small working group of ACTS members had prepared two papers. One, in October 2008, addressed the future of ACTS, how it operates as a tri-partite committee and its relationship with WATCH. At the December 2008 ACTS meeting, the committee considered that whilst this document portrayed a statement of general principles and was useful in this regard, there was a clear need for the committee to produce a plan of work. The working group produced a second document for consideration at the last ACTS meeting (February 2009). ACTS considered that the draft work plan should be developed further, in light of a request by the HSE Board that ACTS give a presentation to it on its proposed future work. The WATCH/ACTS member considered that ACTS did not have a clear idea of how the HSE Board perceived ACTS; there had been some detachment from ACTS in HSE's approach to regulating chemicals. He asserted that ACTS had much to offer as an advisory body and that it would be a significant loss if ACTS was disbanded.</p> <p>The member informed WATCH that some ACTS members had expressed the view that HSE was by-passing ACTS on certain issues that were being directed towards WATCH (the ongoing work on asbestos being an example). To some extent, considerations being made by WATCH had previously been debated at the level of ACTS. There was also an issue regarding the governance of ACTS and of WATCH. ACTS members felt that the ACTS chairman should be someone on the HSE Board. They also felt that a strengthened relationship should be established between WATCH and ACTS; the chairman of WATCH should be a permanent member of ACTS.</p>
8.17	The Chairman thanked the WATCH member for this introduction and invited comments from the committee.

8.18	Another WATCH member who was also a member of ACTS concurred with this perspective given on the future of ACTS. He added that it was difficult to gauge HSE's view of ACTS. HSE had tasked ACTS with developing a plan of work to present to the HSE Board, but had not contributed to its development. He reiterated the view that the role of ACTS as a tri-partite advisory body was valuable and it would be a considerable loss if such a body, pertaining specifically to chemicals, did not continue. He agreed that on some important current issues it is unclear what the role of ACTS should be. For example, the issue of low-level exposure to asbestos was directed to WATCH by HSE, but ACTS had not been involved. He pointed out that on issues such as what levels of risks posed by substances can be deemed to be acceptable, in terms of constitution and terms of reference ACTS was better placed than WATCH to make these judgements.
8.19	A WATCH member commented that WATCH and ACTS did not appear to be well linked. If, in further debate on the future of ACTS, a proposal was made that WATCH and ACTS should be merged as one governmental advisory body, he envisaged that most WATCH members would be opposed to such a proposal. He emphasised that WATCH and ACTS have separate and distinct functions: WATCH is a scientific and technical committee, whereas ACTS considers more strategic issues and matters of principle. In his view, there should be a more overt process of passing to ACTS the outputs of WATCH.
8.20	A WATCH member pointed out that unlike WATCH, ACTS did not seem to have anyone in HSE acting as a champion of its role and value.
8.21	Another member considered that the role of ACTS, and how this complements the role of the HSE Board, should be clearly and positively characterised.
8.22	The Chairman asked the WATCH members who are also members of ACTS how ACTS' future work plan would be developed from this point onwards? A member replied that the HSE Board had requested that ACTS prepare and present a proposed 2-page work plan at the April 2009 HSE Board meeting.
8.23	The Chairman thanked members for their comments and brought discussions on this item to a close.
8.24	ACTION : Re paragraph 8.15, the WATCH Secretariat would identify some examples of consultation documents for WATCH to reflect on further at the next WATCH meeting in June 2009.
9	Date of next meeting
9.1	The Chairman thanked everybody for their contributions to the meeting. The Secretary reminded WATCH that the next meeting would be held on the 12 th June, at the Town Hall, in Bootle. The meeting closed at 15.15